

Monitoring & Evaluation Plan

Mongolia

May 2012



Table of Contents

1. Overview	Error! Bookmark not defined.
2. Summary of the Program and Objectives	6
3. Monitoring Component	12
Indicators.....	12
Baselines and Targets for Performance	12
Disaggregating Data by Gender, Income, and Age	12
Data Quality Reviews	13
M&E Reports	14
Linking Disbursements to Performance.....	15
4. Evaluation Component	16
Process Evaluations	Error! Bookmark not defined.
Impact Evaluations and Final Evaluations.....	16
1. Property Rights Project	17
3. Vocational Education and Training Project	18
4. Health Project.....	18
5. Energy and Environment Project	19
6. Road Project.....	19
Ad Hoc Evaluations and Special Studies.....	Error! Bookmark not defined.
5. Assumptions and Risks	20
6. Implementation and Management of M&E	24
Responsibilities	24
Review and Revision of the M&E Plan	25
The Management Information System for M&E...	Error! Bookmark not defined.
Coordination of M&E Data Gathering	26
M&E Budget	28
Annexes	29
A. Indicator Definition Tables	29
B. Performance Tracking Tables	67
C. Detailed Impact Evaluation Plan.....	80
D. Summary of Indicator and Target Changes (2010 Revision)	90
E. Summary of Indicator and Target Changes (2011 Revision).....	106



1. List of Acronyms

AADT	Annual Average Daily Traffic
ALACGAC	Administration of Land Affairs, Construction, Geodesy and Cartography
AMI	Acute Myocardial Infarction
AVET	Agency for Vocational Education and Training
BCC	Behavior Change and Communication
CO	Carbon Monoxide
CORS	Continually Operating Reference Stations
CPI	Consumer Price Index
CRETN	Central Regional Electricity Transmission Network
DALY	Disability adjusted life-years
DOH	Department of Health
DQA	Data Quality Assessment
DQR	Data Quality Review
EA	Environmental Assessment
EBRD	European Bank of Reconstruction and Development
EEP	Energy and Environment Project
EMP	Environmental Management Plan
EPOS	EPOS Health Management
ERR	Economic Rate of Return
ESA	Environmental and Social Assessment
ESIA	Environmental and Social Impact Assessment
ESOC	Environmental and Social Overview Consultant
FBIS	Facility-Based Impact Study
FGP	Family Group Practices
GASR	General Authority of State Registration
GIS	Geographic Information System
GoM	Government of Mongolia
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HOB	Heat Only Boiler
HPV	Human Papilloma Virus
IC	Institutional Contractor
IE	Impact Evaluation
IEC	Information Education Communication
IFC	International Finance Corporation
IPA	Innovations for Poverty Action
IRI	International Roughness Index
KAP	Knowledge, Attitude and Practice
LEEP	Loop Electrosurgical Excision Procedure
M&E	Monitoring and Evaluation
MCA-Mongolia	Millennium Challenge Account-Mongolia



MCA-M M&E Plan

MCC	Millennium Challenge Corporation
MCEEIF	Millennium Challenge Corporation Innovation of Energy Fund
MECS	Ministry of Education, Culture and Science
MLSW	Ministry of Labor and Social Welfare
MOFALI	Ministry of Food, Agriculture and Light Industry
MUST	Mongolian University of Science and Technology
NCDI	Non-Communicable Disease and Injuries
NCVET	National Council of Vocational Education and Training
PHC	Primary Health Care
PIA	Program Implementation Agreement
PIU	Project Implementation Unit
PM	Particulate Matter
PPP	Public and Private Partnership
PURLS	Peri-Urban Rangeland Leasing Survey
RFP	Request for Proposal
RNA	Rapid Needs Assessment
RW	Railway
STEPS	Mongolian STEPS Survey on the Prevalence of Noncommunicable Disease and Injury Risk Factors - 2009
STI	Sexually Transmitted Infection
TBD	To be determined
TLC	Training Logistics Contractor
TOR	Terms of Reference
TVET	Technical Vocational Education and Training
UB	Ulaanbaatar
VET	Vocational Education and Training
VOC	Vehicle Operating Cost
WHO	World Health Organization



Overview

On October 23, 2007, the Government of Mongolia (GoM) and the Millennium Challenge Corporation (MCC), a United States Government agency, signed a five-year, \$285 million Compact to reduce poverty in Mongolia through economic growth. Annex III of the Compact provided a description of the Monitoring and Evaluation (M&E) Plan for the MCA Program. Millennium Challenge Account – Mongolia (MCA-M) was created as the entity accountable for implementing the Compact activities.

Monitoring and Evaluation (M&E) is essential for a results-based approach to program management. It was a key component of program design and remains incorporated into all facets of the program cycle through program close-out. The purpose of the M&E system is (i) to allow for staff at all levels to continually check if project activities are actually contributing towards the MCC and MCA-M's intended outputs and outcomes and (ii) to assist MCA-M management to adjust the project strategy in order to maximize the MCC and MCA-M's impact.

The M&E Plan serves the following functions:

- Explains in detail how the MCC and MCA-M will monitor the various Projects to determine whether they are achieving their intended results and measure their larger impacts over time through evaluations.
- Outlines any M&E requirements that MCA-M must meet in order to receive disbursements.
- Serves as a guide for program implementation and management, so that MCA-M Management Unit staff, Board members, Stakeholders' Committee members, program implementers, beneficiaries, and other stakeholders understand the objectives and targets they are responsible for achieving, and are aware of their progress towards those objectives and targets during implementation.
- Establishes a process to alert implementers, stakeholders and MCC to any problems in program implementation and provides the basis for making any needed program adjustments.

This M&E plan is considered a binding document, and failure to comply with its stipulations could result in suspension of disbursements. It may be modified or amended as necessary only with the approval of MCC and if it is consistent with the requirements of the Compact and any other relevant supplemental legal documents. Unless otherwise indicated, capitalized terms used but not defined in this opinion have the meaning provided in the Compact.



2. Summary of the Program and Objectives

Mongolia is landlocked between Russia and China, with approximately 2.6 million inhabitants in a territory of 1.56 million square kilometers. Nearly half of the population is concentrated in Ulaanbaatar, its capital, and the remainder is largely dispersed throughout the country. Mongolia's aging transport infrastructure and weak institutions are a significant constraint to economic growth and development, particularly given the pressures of the country's abrupt transition to a market economy, the collapse of financial support from Russia, and the rapid urbanization of what traditionally has been a highly dispersed rural herding society.

The Program is intended to release the potential of certain critical interlocking human, institutional, and physical resources that factor centrally in Mongolia's efforts to broaden and deepen economic development. The Program is expected to have a significant direct impact on individuals living in poverty, and significant indirect and ancillary benefits by creating new economic opportunities and increasing the capacity of individuals and groups to participate fully in and benefit from economic growth.

The Program consists of the Property Rights Project (Urban and Peri-Urban), the Vocational Education Project, the Health Project, the North-South Road Project and Energy and Environment Project as further described below (each, a "Project"). The direct aim of the Mongolia Compact is to reduce poverty through economic growth in Mongolia as a result of (i) increased security and capitalization of land assets and increase in peri-urban herder productivity and incomes, (ii) increased employment and income among Mongolians through access to more effective vocational education, (iii) reduced risk and incidence of premature death and disability from Non-Communicable Diseases and Injuries (NCDIs) (iv) more efficient transport for trade and access to services through the North-South corridor and (v) increased wealth and productivity through greater fuel use efficiency and decreasing health costs from air pollution in Ulaanbaatar. The Objectives and Outcomes of the Mongolia Compact can be summarized as follows:



PROGRAM LOGIC

Compact Goal

Project Objectives

Poverty Reduction through Economic Growth	<p>Property Rights Project Objective: Increase the security and capitalization of land assets held by lower-income Mongolians, and increase peri-urban herder productivity and incomes</p> <p>Outcomes: (1) Increased land right formalization and (2) Optimized peri-urban rangeland carrying capacity and range management</p>
	<p>Vocational Education Project Objective: Increase employment and income among unemployed and underemployed Mongolians</p> <p>Outcome: Improved quality and relevance of TVET System</p>
	<p>Health Project Objective: Reduce the risk of premature death and disability from NCDIs (Non-Communicable Diseases and Injuries) and traffic injuries</p> <p>Outcomes: (1) Improved National and local response to NCDI (2) Increased understanding of NCDI prevention, and (3) Increased availability of sound NCDI services</p>
	<p>NS Road Project Objective: More efficient transport for trade and access to services</p> <p>Outcomes: (1) Increased Traffic, (2) Decreased travel times, (3) Decreased vehicle operating costs, and (4) Decreased road roughness</p>
	<p>Energy and Environment Project Objective: Increased wealth and productivity through greater fuel use efficiency and decreasing health costs from air pollution in Ulaanbaatar.</p> <p>Outcomes: (1) Reduced incidence of respiratory-related morbidity, (2) Reduced fuel consumption, (3) Increased energy efficiency, (4) Substitution of wind power for additional coal-fired power generation capacity, (5) Improved power quality.</p>



Specific sub-activities for MCC funding were selected based on economic rates of return (ERRs) greater than or equal to the hurdle rate established by MCC of 15%. Further, the monitoring indicators for the Projects are tied closely to the assumptions used in the economic analysis of the Projects. The ERR models can be found on MCC's website as well as more detailed information on each of the Projects.

I. Project 1: Property Rights

a) Property Registration

Objective: Increase the security and capitalization of land assets held by lower-income Mongolians

Initial Estimated ERR: 38.5 percent

Current Estimated ERR: 21 percent

Summary of activities:

- (a) Improvement of the Land Privatization and Registration System Activity: MCC Funding will be used to improve the formal system of privatizing and registering land rights.
- (b) Privatization & Registration of Ger Area Land Plots Activity: MCC Funding will be used to privatize and register approximately 53,000 land plots in the *ger* areas of three districts in Ulaanbaatar (UB) named Songinokhairkhan, Bayanzurkh and Chingeltei and eight regional centers.

Beneficiaries:

- Approximately 53,000 households, or 95,891 individuals, in ger areas of three districts in Ulaanbaatar named Songinokhairkhan, Bayanzurkh and Chingeltei and eight regional centers in Mongolia. (The Compact was amended in December 2011 to reduce the beneficiary target from 75,000 households to 53,000 households.)

Institutions Assisted:

- Land offices, General Authority for State Registration (GASR) and related agencies
- Administration of Land Affairs, Construction, Geodesy and Cartography (ALACGaC)

b) Peri-Urban Rangeland Management

Objective: Increase peri-urban herder productivity and incomes

Initial Estimated ERR: 26.6 percent for Darkhan, Erdenet, Ulaanbaatar and 31.6 percent for Kharkhorin and Choibalsan

Current Overall Estimated ERR: 25 percent

Summary of activities:

- (a) Peri-Urban Land Leasing Activity: MCC Funding will be used to identify and lease approximately 465 serviced tracts of rangeland to herder groups in the peri-urban areas of Darkhan, Erdenet, Ulaanbaatar, Kharkhorin and Choibalsan

Beneficiaries:

- The beneficiary target stated in the Compact is 465 herder groups. They represent 1,395 households and approximately 7,300 individuals. (Current expectations are that 399 herder groups representing 1,197 households and 6,277 individuals will benefit.)



II. Project 2: Vocational Education

Objective: Increase employment and income among unemployed and underemployed Mongolians

Estimated ERR: The original estimated ERR was 19.8 percent. However, the assumption that other donors and/or the GoM would invest in new training equipment was unmet, reducing expected ERRs. Although a revised ERR model has not been run, benefits are unlikely to have decreased below 12.4% (applicable hurdle rate in 2009) assuming no new benefits; the best estimate of the current ERR is 14.3%. In the opposite direction, anecdotal evidence suggests that salaries facing successful graduates may be higher than previously believed, and benefits of increased productivity to firms and benefits accruing to graduates of short-term programs need to be added.

Summary of activities:

- (a) Reforms to TVET Policy and Operational Framework Activity: MCC Funding will be used to strengthen the policy and operational framework, to create an efficient governance and standard-setting mechanism, and to secure private sector participation for technical and vocational education and training.
- (b) Creation of Skills and Standards and Competencies System Activity: MCC Funding will be used to establish skills standards and a competency-based qualification training system based on nationally approved units of competency, modules and courses, and to install these innovations in training institutes.
- (c) Competency-Based Training System Activity: MCC Funding will be used to implement the new competency-based training system in TVET schools.
- (d) Career Guidance System Activity: MCC Funding will be used to provide career guidance and employment information services to Mongolians.
- (e) Improvement of Learning Environment Activity: MCC Funding will be used to upgrade equipment and technology in practical training sites of selected TVET schools to support project intervention into the sector.

Beneficiaries:

- TVET graduates, unemployed and underemployed Mongolians
- Population benefitting from labor market system
- A total of 170,000 individuals over 20 years

Institutions Assisted:

- TVET centers and teachers
- Ministry of Education, Culture and Science

III. Project 3: Health

Objective: Reduce risk and incidence of premature death and disability from NCDIs

Initial Estimated ERR: 21.0 percent

Current Estimated ERR: 13.4 percent

Summary of Activities:

- (a) Improved National and Local Response to NCDI: MCA Funding will be used to encourage local and national initiatives to promote healthy lifestyles at workplaces, schools and communities; support policy initiatives to increase NCDI funding, control the use of tobacco and



alcohol and other policy and program initiatives.

- (b) Improved NCDI Knowledge: MCA Funding will be used to increase public awareness of risky behaviors, the need for regular screening and testing and the need to respond rapidly to stroke and other NCDI danger signs. Funding will support the national communication strategy, including awareness campaigns, events and education outreach focusing on youth and adult general, changes in school health curricula and working population (e.g. in workplaces),
- (c) Improved NCDI Service: MCA Funding will be used to increase the availability of sound NCDI services by changing treatment NCD protocols and provider training, mobilizing client demand introducing modern cost-effective procedures, and providing key equipment and supplies.

Beneficiaries:

- 95 percent of the adult population nationwide
- Approximately 10 % of the households (110,000 households) are expected not to incur heavy financial and care burden from NCDIs.
- 10 percent of girls aged 11-15
- Additionally, over the next 20 years approximately 1,726,815 people (95 percent of age-group 15-64) of the adult population nationwide are expected to have a decreased risk for premature death and incidence of NCDIs and an increase of productive years.

Institutions Assisted:

- Ministry of Health and Government of Mongolia
- NCDI health facilities, health institutions, schools, workplaces

IV. Project 4: Choir-Sainshand Road

Objective: More efficient transport for trade and access to services

Estimated ERR (expected value): 11.2 percent **Summary of activities:**

Choir-Sainshand Road: MCC Funding will be used to construct an all-weather 176.4 km road from Choir to Sainshand.

Beneficiaries:

- 168,900 people over 20 years

V. Project 5: Energy and Environment

Objective: Increased wealth and productivity through greater fuel use efficiency and decreasing health costs from air pollution in Ulaanbaatar

Estimated ERR:

- a) For the wind park, the ERR for the portion funded specifically by MCC (subsidy and network upgrades) was calculated to be slightly below zero. The entire project has an overall ERR of 14.1 percent. The ERR of the MCC-financed network upgrades considered separately was calculated at 11.3 percent, and are currently being updated to reflect recent events.
- b) For the Energy Efficiency Innovation Facility (MCEEIF), the estimated ERR is 23.2percent.

Summary of activities:

- (a) Millennium Challenge Energy Efficiency Innovation Facility: MCC Funding will be used to identify the most energy efficient technologies,



evaluate and make consumers aware of their benefits, and make available financial incentives so that such technologies can be quickly adopted.

- (b) Wind Activity: MCC Funding will assist in the development and production of the first commercial wind-powered electricity generation facility in Mongolia.
- (c) Public Awareness Activity: MCC Funding will support a broad and comprehensive public awareness campaign, which will increase consumer awareness of: renewable energy; energy efficiency; timeliness and availability of subsidies; and the identity of participating partners.

Beneficiaries:

- 338,425 people in Ulaanbaatar by 2029

Compact Beneficiaries	
Project/Sub-Activity	Number of Beneficiaries
1. Property Rights	
Urban	Up to 95,891 individuals
Peri-urban	The activity's initial goal after addition of Kharkhorin and Choibalsan was 465 herder groups representing 1,395 households and approximately 7,300 individuals. Current expectations are around 399 herder groups (1,197 households and 6,277 individuals)
2. Vocational Education	Up to 45 VTTCs and 170,000 TVET graduates over the next 20 years
3. Health	Over the next 20 years approximately 1,726,815 people (95 percent of age-group 15-64 ¹) of the adult population nationwide are expected to have a decreased risk for premature death and incidence of NCDs and an increase of productive years. Approximately 10 % of the households (110,000 households) are expected not to incur heavy financial and care burden from NCDs.
4. NS Road	168,900 people over the next 20 years
5. Environment and Energy	338,425 people in Ulaanbaatar by 2029

¹ Mongolian Statistical Yearbook 2009



3. Monitoring Component

Project and Activity performance will be monitored systematically, regularly, and on an on-going basis through the regular indicator tracking system. This analysis allows Directors of MCA-M and MCC to make programmatic adjustments as necessary with the view towards improving the overall impact of the Program.

Annex III of the Compact described the Compact Goal, Objective, and Outcome Indicators. This section of the M&E Plan builds on this information and includes a more defined outline of the plan for monitoring key indicators, including Output and Process Milestone Indicators. In addition, each implementer will monitor the inputs and outputs of each activity in a detailed manner. The M&E Officer in the MCA-M Management Unit will be available for consultation and assistance in setting up each implementer's monitoring plan.

Indicators

Project and Activity level outcomes will be measured by indicators. The Indicator Definition Tables in Attachment A provide a detailed definition of each indicator; unit of measurement, source of data, method of data collection and frequency of data collection.

Baselines and Targets for Performance

The baselines and targets for each indicator are shown in the Performance Tracking Tables in Attachment B. Targets are derived from the initial economic analysis justifying Program investments. Prior to implementation of a specific Activity, all baselines and targets relevant to that Activity should be specified, unless there are exceptions approved by MCC. If necessary, targets may be revised with written approval from MCC.

Disaggregating Data by Gender, Income, and Age

The ITT includes several gender specific indicators. In addition, the following indicators can be sex-disaggregated (by individuals or head of household), age, and/or income/consumption and will be reported in this manner to MCC:

Indicators to be Disaggregated by Gender, Income and Age			
Indicators	Gender	Age	Income
Program			
Urban Property Rights Project			
Households accessing bank credit	X	X	X
Household land rights formalized*	X		
Stakeholders Trained*	X		
Peri-Urban Property Rights Project			
Net earned income of herder households in Darkhan, Erdenet and UB	X	X	X
Net earned income of herder households in Choibalsan and Kharkhorin	X	X	X
Leases awarded (female-headed households)	X		
Leases awarded (male/female members in co-headed households)	X		



Stakeholders trained*	X		
Stakeholders trained (Female)*	X		
Repayment rate by the leaseholders (Female)	X		
Vocational Education Project			
Annual salary of TVET graduates	X		
Rate of employment for TVET graduates	X		
Graduates from MCC-supported educational facilities*	X		
Students participating in MCC-supported education activities*	X		
Certified vocational education teachers	X	X	
Employed graduates of MCC-supported education activities*	X		
Instructors trained*	X		
Percent of active teachers receiving certification training	X		
Proportion of families with TVET graduates**			X
Health Project			
Prevalence of reduced sodium intake	X		
Prevalence of high blood sugar	X		
Prevalence of hypertension	X		
Exposure to second-hand smoke	X		
Screening for diabetes**	X		
Screening for hypertension**	X		
Prevention of cervical cancer through HPV vaccination**	X		
Productive years of workforce	X		
High risk for NCDs	X	X	
Awareness of working population related to NCD prevention	X	X	
Early detection of cervical cancer	X		
Screening for cervical cancer	X		
Capacity of health staff	X		
Capacity built in stroke and AMI	X		
Road Project			
Number of workforce trained on trafficking in persons, health and safety, and HIV/AIDS and STIs	X		
EEP Project			
Number of female-headed households purchasing subsidized products	X		

*-Common Indicator

** -New Indicator

Data Quality Reviews

Data quality reviews (DQR) will verify reported performance data by analyzing the accuracy, reliability, timeliness, and objectivity of performance data. The objective of any data quality review is to verify the quality and the consistency of performance data over time, across different implementers and reporting institutions. Such data quality reviews will also identify cases in which the highest degree of data quality is not possible, given the realities of the data



collection circumstances. These assessments will cover data reported from implementers, survey firms hired by MCA-M, and other data sources as necessary, such as the National Statistical Office (NSO), Property Registry Office, Cancer Center and related Government Agencies.

The particular objectives for the data quality reviews will be identification of the following parameters: i) what proportion of the data has quality problems (completeness, conformity, consistency, accuracy, duplication, integrity); ii) which of the records in the dataset are of unacceptably low quality; iii) what are the most predominant data quality problems within each field.

MCA-M will contract an independent data quality reviewer in compliance with MCC Program Procurement Guidelines. The entity responsible for data quality reviews should be hired no later than the end of Year 2 of the Compact. The M&E Officer and other Officers, as appropriate, within MCA-M and the PIUs should also regularly check data quality. In doing so, MCA-M may hire individual data quality monitors to monitor data collection and quality, as needed. MCA-M also periodically contracts independent data quality monitors assigned to specific data collections.

M&E Reports

Periodic Reports from MCA-M to MCC are required by the Program Implementation Agreement (PIA). Periodic Reports are part of a package of reports that MCA-M submits to MCC on a regular basis. MCC's Reporting Guidelines describe the necessary content of these Periodic Reports and their due dates. The guidelines and formats can be found on the web at www.mcc.gov under "Country Tools." Some of those reports include the tracking of on-going "actual" progress of Project and Activity indicators against "targeted" progress. These reports serve as a vehicle by which the MCA-M Management informs MCC of implementation progress, impediments, lessons learned, best practices and on-going field revisions to Project work plans. Periodic Reports will include data on the indicators described in the Monitoring Component and analysis of those data. The analysis will compare the actual results to the indicator targets and determine the reason for deviations from projections (above a certain threshold).

In addition to the regular Periodic Reports, MCA-M will prepare a final report called a **Compact Completion Report (CCR)**. The CCR shall be prepared according to guidelines provided by MCC taking into consideration, among other things, the objectives and content of the Impact Evaluation. In addition to normal Progress Report content, the CCR should provide:

- A concise description of the Program from proposal to completion;
- A preliminary assessment of the Program's outcomes;
- Identification of beneficiaries including relevant characteristics, such as gender, age, and income level, degree of participation and assessment of differential impacts among the various groups (when possible);
- A preliminary assessment of the Program's sustainability--that is, its likelihood to reach the future monitoring targets established as a measure of the projects' sustainability
- Lessons learned.

The Compact Completion Report is due at the latest forty-five (45) calendar days from the



expiration of the Compact.

Information about progress on implementation should be posted on MCA-M's website.

Linking Disbursements to Performance

The Program Implementation Agreement includes the following condition for each disbursement:

“there has been satisfactory progress on the M&E Plan for the Program, relevant Project or Project activity and substantial compliance with the requirements of such M&E Plan”
(PIA, Section 3.5 (b)(v))

Whether or not there has been satisfactory progress on the performance indicators will be analyzed by MCC each time a Disbursement Request is submitted and approval of each request will be conditional on MCC determining that there has been satisfactory progress on the indicators.

In addition, whenever feasible, MCA-M should include performance targets as deliverables against which payments will be made in implementation contracts. In other words, MCA-M contractors should be held responsible for achieving the M&E targets when applicable.



4. Evaluation Component

Evaluation is an essential element of the Mongolia Compact. One of the key features of the MCC's approach to development assistance is its strong commitment to conducting rigorous impact evaluations of its programs, which employ, whenever possible, methodologies that determine whether results can be reliably attributed to MCC interventions. However, in addition to impact evaluations, MCA-M may conduct process evaluations to improve program management and provide lessons learned before the impact can be analyzed.

Impact Evaluations and Final Evaluations

The Program will be evaluated based on the extent to which the interventions contribute to the Compact Goal, which is to decrease poverty through improved economic performance. These impact evaluations are different from process evaluations because they attempt to attribute any observable impacts to the Compact activities. In other words, a comparison group is used to analyze what would have happened without the Program. (The detailed Impact Evaluation Plan is attached.)

MCC will be responsible for contracting the impact evaluators for the Property Rights and Vocational Education Projects; whereas MCA-M will contract the evaluators for the Health Project. It is undecided what type of evaluation will be undertaken for the EEP. The methodologies to be used in the evaluations will be decided upon by the entity responsible for conducting the evaluations based on a prior, agreed-upon statement of work.

Impact evaluations will address the following issues at a minimum:

- Effectiveness of program activities in meeting Compact goals;
- Attribution of measurable outcomes to MCC/MCA-M interventions;
- Reasons behind the success or failure to achieve goals, objectives and targets;
- Unintended results of the program (positive and negative);
- Long-term sustainability of results;
- Re-estimated economic rates of return, comparisons to original estimates, and assessment of differences;
- Lessons learned applicable to similar projects.



Summary of Evaluation Design

(See annex C- for full design)

1. Property Rights Project

Treatment group: The treatment group will consist of households in ger areas throughout Mongolia that have been chosen to be included in the MCA-Mongolia program.

Control group: The control group will consist of households in ger areas throughout Mongolia that have *not* been chosen to be included in the MCA-Mongolia program.

Selection method: The current evaluation design groups hashaa plots into geographic clusters defined by kheseq, the smallest administrative unit utilized in Mongolian cities. Some kheseq areas will be randomly selected to receive the privatization and registration assistance (the treatment group), while other kheseq areas will not receive the privatization and registration assistance at all (the control group).

Baseline data collection: Two surveys have been developed to capture extensive baseline data on the intervention of property rights project.

1. Special Hashaa Plot Survey will evaluate the impact of the program to assist Mongolians in registering their hashaa properties. The survey will collect data on an estimated 3000 to 8000 households across several hundred kheseq areas in Ulaanbaatar and the aimag centers of Erdenet, Darkhan and Tuv.
2. Urban Registry Process Study will examine changes in the time, costs, and procedures associated with real property transactions, including land privatization and registration, as well as a number of relevant secondary transactions. The study will collect data on roughly 400 individuals engaged in the completion of such registry processes.

2. Peri-Urban Rangeland Project

Treatment group: The treatment group will consist of herder groups in peri-urban areas of UB, Erdenet, Darkhan, Choibalsan and Kharkhorin that have been chosen to be included in the MCA-Mongolia program.

Control group: The control group will consist of herder groups in peri-urban areas of Choibalsan and Kharkhorin that have *not* been chosen to be included in the MCA-Mongolia program. In UB, Erdenet, and Darkhan, there were a smaller number of applicants than intended, and so there will be a comparison group matched by propensity score.

Selection method: Random selection in Choibalsan and Kharkhorin and propensity score matching in UB, Erdenet, and Darkhan.

Baseline data collection: Three surveys have been developed to capture extensive baseline data on the intervention of peri-urban rangeland project.

1. Peri-Urban Rangeland Leasing Survey will evaluate the impact of the program which leases peri-urban rangeland to herder groups. The survey includes three related data



collection instruments. The Peri-Urban Rangeland Leasing Survey will collect data on project herder groups and associated households residing in peri-urban areas of UB, Darkhan, Erdenet, Choibalsan and Kharkhorin. In addition, the survey will gather data on a number of neighboring households living on land that is contiguous to the tracts utilized by the herder groups. Information on neighboring households will be used to answer questions regarding possible spillovers that the project may have on nearby residents. Finally, a separate questionnaire will be administered to soum governors in project areas to collect information on soum level outcomes like migration and land conflicts.

2. Rangeland Quality Productivity Survey will examine how the securing of long-term land use rights and provision of infrastructure and training through PURP affects not just livestock herding efficiency and productivity, but also environmental degradation and rangeland quality in peri-urban areas.

3. Vocational Education and Training Project

Treatment group: Vocational school applicants who have been admitted to the designated 10 VET Institutions.

Control group: Vocational school applicants who have *not* been admitted to the designated 10 VET Institutions.

Selection method: Randomized Admissions was used on the applicants at the 10 designated vocational education and training institutions in two rounds.

Baseline data collection: Three surveys have been developed to capture extensive baseline data on the intervention.

1. Student Admissions Survey will register prospective applicants to the VET Institutions and collect data about them. This is a longitudinal survey that follows up the same survey respondents in 3 years and collects data about their life after VET school graduation.
2. School Administrative Survey will capture 1) information that fleshes out the TVET school experience, particularly in light of the TVET Project's plans for curriculum reform, administrator/teacher trainings, and equipment upgrades, and 2) teachers' assessment of the performance of students included in the randomized evaluation.
3. Student Graduation Survey will evaluate the technical and vocational aptitude the treatment and control group learned during their study at the VET Institutions. The survey will be taken in the form of a test for the VET school graduating applicants.

4. Health Project

Treatment group: 95% of the total population of Mongolia

Control group: No control group.

Selection method: Not applicable. Pre-post method.

Baseline data collection: Three surveys have been developed to capture extensive baseline data on the intervention.



1. STEPS Survey.
2. Facility-Based Impact Study.
3. Knowledge, Attitude and Practice (KAP) General Public Survey.

5. Energy and Environment Project

Treatment group: Ulaanbaatar ger area residents who have adopted MCEEIF-subsidized stoves or insulation.

Comparison group: Ulaanbaatar ger area residents who have not adopted MCEEIF-subsidized stoves or insulation.

Selection method: Not applicable. As selection bias is expected between the treatment and comparison populations, a matched design will be used.

Baseline data collection: Two surveys have been developed to capture extensive baseline data on the intervention.

1. EEP Stove behavior survey.
2. EEP Stove emission survey.

Household surveys will be integrated with emission measurements from a subsample of households, combined with seasonal fuel use leading to overall emissions estimates. These will be linked to ambient air measurements to model ambient air pollution changes and exposure for Ulaanbaatar more generally, and an established dose response function will be used to estimate health effects of modeled changes in ambient air quality.

6. Road Project

Selection method: Not applicable. Project will undergo post-completion economic rate of return model revision.



5. Assumptions and Risks

The Mongolia program logic is based on specific assumptions about the linkages between individual Project Activities and the goal of poverty reduction through economic growth. Assumptions inform the economic analysis (economic rates of return) while risks are external to program implementation, but are likely to affect program success.

Urban Property Rights Project	
Assumptions Improved accuracy and accessibility for recognizing and transferring land rights will help urban land owners to use their land as a marketable asset.	Risks Usage of land as a marketable asset or number of people who was served by the land registration center will depend on land owner's personality, knowledge and entrepreneurial ability.
Peri-urban Property Rights Project	
Assumptions Improved rangeland for leasing and supported training on rangeland management will advance livestock herding efficiency and productivity in peri-urban area.	Risks Efficiency improvement on productivity of livestock herding in leased rangeland will not be high due to herders' experience, knowledge and management Risk of reduced productivity and rangeland degradation in neighbor areas adjacent to the lease sites
TVET Project	
Assumptions Reforms to TVET policy, creation of skills standard and competencies system will help improved quality of TVET system. Capacity building on TVET schools around the country and new curriculum will advance TVET graduates' competency. TVET schools graduates will support the supply	Risks Overall performance of TVET system will not be improved if it lacks Government financing, investment and policy support. TVET graduates' competency will not be advanced if capacity building on TVET and new curriculum fail to be market oriented and meet the demand of the labor market. TVET schools need to have good feedback and cooperation with private sector in labor market. Technical labor force demand will depend on



of technical labor force and contribute to the construction and production industry.

Small grants and project intervention will promote dissemination of best practices and cause the competition among TVET schools

Provision of up-to-date equipment, technology and tools and upgrading will enable TVET schools to train graduates who can meet labor market demand after graduation in the long run.

Imported work force in mining and construction sectors will be decreased.

PPPs will develop through involving firms to provide best on-site training and workplace learning practices.

economic circumstances and government policy at the macro level and skills and productivity of graduates at the micro level.

Uneven competition between TVET schools to secure Project support.

Poor maintenance and care of expensive equipment, technology and tools including theft. Ongoing need for replacement equipment and tools owing to wear and tear and technology developments.

Projected growth in the mining and construction sectors stalls.

Poor pool of eligible firms to compete for competitive grants.

Health Project

Assumptions

Improved system for NCDI prevention will advance hospitals and health centers to detect and treat NCDI effectively

Adoption of healthy lifestyles and preventive measures to avoid NCDI causes will reduce incidence and extend healthy life expectancy of the labor force.

Improvement on NCDI early detection activity will reduce the NCDI treatment cost and increase recovery rate.

Risks

Performance of NCDI prevention system will depend on the effective application of the experience and knowledge of NCDI professionals as well as adequate Government support (budget for NCDI and public policy)

Significant adoption of healthy lifestyles and preventive measures may take more time than anticipated hence affecting the rate of change in incidence as well as rates of productivity of the labor force in the short-run.

Early detection system may work ineffectively if people do not have desire engage in check-ups and to pursue benefits of early detection.



North-South Road Project

Assumptions

Availability of qualified management staff to manage the Road project

Technical assistance activities will improve/support road maintenance system involving state-owned and private companies

Cost overruns due to unforeseen events shall be supported by the government.

MCA-M performs well enough and complete Road construction work on time thanks to appropriate planning and successful procurement

Risks

Design and Construction Results: Poor contractor performance and substandard designs or workmanship due to poor supervision

Road Maintenance: Current system may not be adequate for sustainable routine and periodic maintenance of additional new roads, Inconsistent performance by maintenance companies, which are state-owned

Increase in costs: Cost overruns due to unforeseen events

Work execution: Completing the civil works within the remaining compact period (4 years) may be challenging, particularly in the context of Mongolia (severe climate, remote construction sites, procurement challenges)

Energy and Environment Project

Assumptions

MCEEIF

Significant donor coordination and ongoing activities in the sector will expedite evaluation of a variety of energy efficient products and homes.

One size fits all has not worked in the past. Offering a variety of solutions to consumers and an intense public awareness and informational campaign will help maximize participation.

Demand is price elastic. Subsidies are expected to amount to the difference between the price of the energy efficient technology and the price of its next closest traditional substitute or more, as supported by market and economic analysis, as an incentive to adoption.

All ger district residents, both existing and new, will be eligible to receive subsidies. In the case

Risks

MCEEIF

Insufficient number of products certified in time to use all funding

Lower than expected adoption of energy efficient technologies

Resale of appliances supported outside of UB



MCA-M M&E Plan

of products (not homes), consumers will sign a consumer participation agreement requiring the trade in or disposal of old product technology.

Investments will lead to noticeable and measurable decreases in emissions

WIND

The wind farm will achieve financial close in December 2009. EBRD and IFC participation will mitigate risk of delayed or non-completion.

GoM agrees to condition precedent to disbursement of subsidies which requires two incremental tariff increases prior to the end of the Compact.

MCC Procurement Guidelines will be followed to procure qualified small works contractors.

Increase in ger area population offsets air pollution gains

WIND

Delay in Wind Farm completion due to delay in finalizing PPA negotiations or construction delays.

GoM does not honor PPA – either does not or cannot purchase power.

Risk on local technical capacity to implement



6. Implementation and Management of M&E

Before beginning implementation of the Projects and Project Activities, MCA-M will orient staff and project implementers on how project performance is to be measured and will provide training necessary to comply with the M&E Plan. MCA-M will also review comments and suggestions from beneficiaries, including the Stakeholders' Committee. MCC and MCA-M may make adjustments to the M&E Plan as needed, provided any modification or amendment of the M&E Plan has been approved by MCC and is otherwise consistent with the requirements of the Compact and any other relevant supplemental legal documents.

Responsibilities

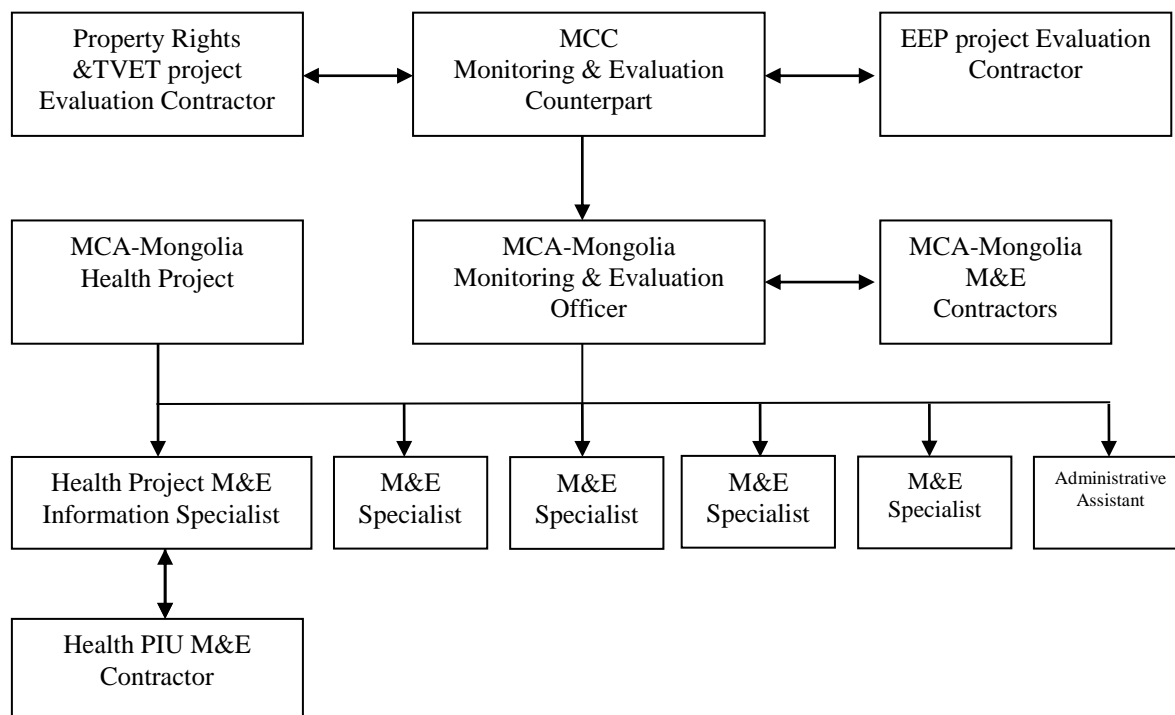
The general M&E responsibilities to be carried out by the Monitoring and Evaluation Officer (M&E Officer) and MCA-M M&E team will include the following:

- Guide the establishment of the M&E system, including data-collection, data-analysis and reporting systems;
- Ensure that the M&E Plan and ERR analysis are modified and updated as improved information becomes available;
- Design the impact evaluation strategy in collaboration with MCC and external consultants;
- Manage the data collection for the impact evaluations;
- Collaborate with the Procurement Officer to prepare and conduct procurement of M&E contracts;
- Ensure that gender specific indicators are identified and findings are disaggregated and reported by gender, age, and income, as applicable;
- Participate in monitoring through site visits, review of program reports and secondary data;
- Facilitate learning exchanges and information dissemination;
- Organize and oversee regular independent data quality reviews.

MCA-M M&E team will consist of five people: M&E Officer, three M&E Specialists and an M&E and Administrative Assistant. In addition, a Health M&E Specialist who will work in the Health PIU to monitor the Health project of MCA-M. The overall M&E function will be implemented through MCA-M M&E team, MCC M&E counterpart and M&E independent contractors. The ME Contractor for the Health Project is EPOS. In addition, MCA-M and PIU Directors will have to be integrally involved in the monitoring process to make sure that the M&E information is used to make important management decisions. The M&E Officer also supports and participates in the MCA Complaint Resolution Procedure to ensure that any complaints related to M&E procedures are appropriately addressed.



MCA-Mongolia M&E team operational structure



Review and Revision of the M&E Plan

The M&E Plan is designed to evolve over time, adjusting to changes in program activities and improvements in performance monitoring and measurement. Periodically, the M&E Officer of MCA-M and representatives of the MCC M&E Division will review how well the M&E Plan has met its objectives. The review is intended to ensure that the M&E Plan measures program performance accurately and provides critical information on the need for changes in project design. The annual review is intended to ensure that the M&E plan:

- Shows whether the logical sequence of intervention outcomes is occurring;
- Checks whether indicator definitions are precise and timely;
- Checks whether M&E indicators accurately reflect program performance;
- Updates indicator targets, if targets are “TBD” or if projects have changed significantly; and
- Adds indicators, as needed, to track unmeasured results

The M&E Plan will be revised by MCA-M, in agreement with MCC, when the need for change has been identified in the review. The revised M&E Plan will be submitted to the MCA-M Board for approval if changes are substantial and to MCC for acceptance. The M&E plan may be revised substantively one more time before or during compact closeout with possible non-substantive revisions before then such as additions of baseline data after analysis is completed.



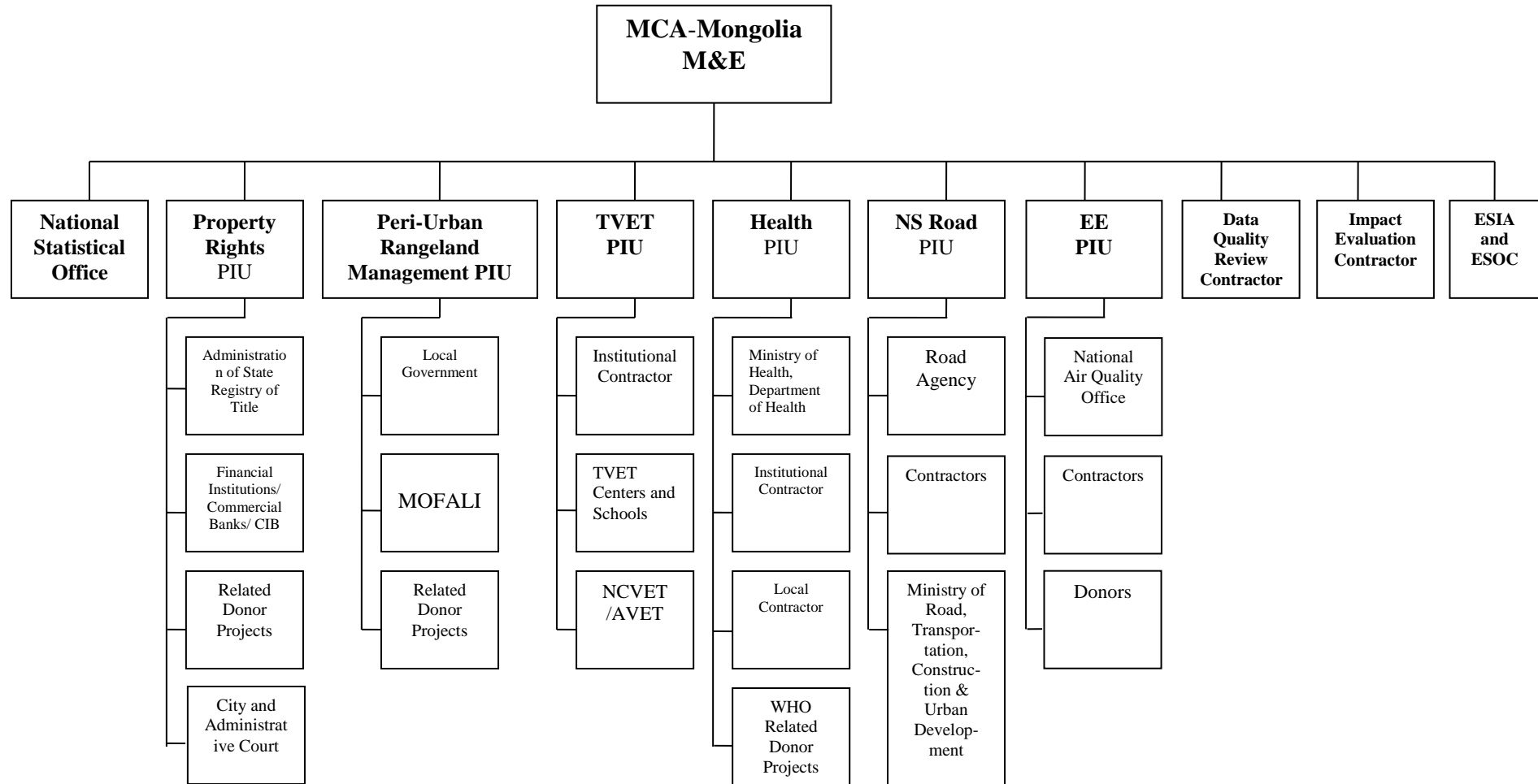
Coordination of M&E Data Gathering

MCA-M will receive data and reports from a variety of institutions, including project implementers, the National Statistical Office and contracted survey firms. The following diagram displays the flow of information from these organizations to MCA-M, and the Indicator Definition Tables in Attachment A outline the information that will be collected and reported by each institution².

² The diagram is meant to depict the flow of information, not the supervisory relationship of the organizations.



Coordination of M&E Data Gathering





M&E Budget

The proposed budget for M&E activities for the five-year term of the Compact plus some data collections to support continued monitoring and evaluation post compact is \$8.2 million. The M&E budget does not include the M&E staff of MCA-M or the PIUs, whose salaries and field trips are included in the administrative budget. A summary of the M&E Budget is shown below.

Mongolia: Compact Budget for Monitoring and Evaluation (in thousands of dollars)

	TOTAL
Surveys	
Health Project	1,032
TVET Project	1,115
Urban Property Right Project	820
Peri-Urban Property Right Project	2,395
Air / Energy Project	1,050
Road Project	172
Capacity Building	
Survey of Graduates (assistance to school administrations) and MCA-M Capacity Building	382
Data Quality Reviewer	
DQR and DQA (supplemental data quality assessment and review)	822
Management Information System	
Database hardware, software and training	24
Evaluation	
Process Evaluations	200
Other Special Studies	189
COMPACT TOTAL	8,201



Annexes

A. Indicator Definition Tables

Property Rights Project – Improvement of Land Privatization and Registration System Activity & Privatization & Registration of Ger Area Land Plots Activity

Indicator Type	Indicator	Brief Definition or Common Indicator Definition	Detailed or Specific Definition, As Needed	Data Source/Responsible Entity	Frequency	Disaggregation	Units
Outcome 1: Increased capitalization of land assets							
Outcome Indicator	Immovable property value of hashaa plots in UB	Average sales price of hashaa plot per square meter in Ulaanbaatar		MCA special hashaa plot survey	Twice (Year 4 and 5)	None	2007 USD per square meter
Outcome Indicator	Immovable property value of hashaa plots outside UB	Average sales price of hashaa plot per square meter in target communities outside Ulaanbaatar		MCA special hashaa plot survey	Twice (Year 4 and 5)	None	2007 USD per square meter
Outcome Indicator	Households accessing bank credit	Number of hashaa plot owners in Ulaanbaatar who are using their hashaa plot as collateral	This data will be based on 4000 households of SHPS as a representative source.	Special Hashaa Plot Survey	Once	Gender, Age and Income	Number
Outcome 2: Increased efficiency of land registration							
Outcome Indicator	Time for property transactions (first-time)*	Change in the average number of days for an individual or company to conduct a property transaction within the formal system.	The average change in the number of calendar days for an individual to conduct a first-time registration of a hashaa plot within the formal system that is not being directly registered by the project. This includes only formal steps to register the hashaa plot for the first time.	General Authority for State Registration (GASR), Land Offices and Notary	Twice (Year 4 and 5)	None	Percentage
Outcome Indicator	Informal time for property transactions (sales)	Change in the average number of days for an individual or company to conduct a property transaction through the formal system.	The average percentage change in the number of calendar days for an individual or company to conduct a property transfer within the formal system.	Urban Property Registry Process Survey	Twice (Year 3 and 5)	None	Percentage



MCA-M M&E Plan

			This includes all informal and formal steps to register the hashaa plot for the first time.				
Outcome Indicator	Cost for property transactions (first-time)*	Change in the average out of pocket cost for an individual or company to conduct a property transaction within the formal system	The average change in out-of-pocket cost for an individual to conduct a first-time registration of a hashaa plot within the formal system that is not being directly registered by the project.	GASR, Land Offices, Tax Office and Notaries	Twice (Year 4 and 5)	None	Percentage
Outcome Indicator	Informal cost for property transactions (sales)	Change in the average out of pocket cost for an individual or company to conduct a property transaction through the formal system	The average percentage change in out-of-pocket cost for an individual or company to conduct a property transfer within the formal system. This includes all informal and formal steps to register the hashaa plot for the first time.	Urban Property Registry Process Survey	Twice (year 3 and 5)	None	Percentage
Outcome Indicator	Number of property transactions**	Total number of property transactions (sales, gifts, inheritance) registered in the formal system at GASR		GASR	Annually	None	Number
Outcome Indicator	Number of mortgage transactions**	Total number of mortgages registered in the formal system (GASR)	This mortgage will be defined as mortgages on privatized land or on property on privatized land in the formal system at GASR.	GASR	Annually	None	Number
Outcome Indicator	Legal and Regulatory Reforms Adopted*	Number of specific pieces of legislation or implementing regulations adopted by the GoM and attributable to compact support.	This figure will be aggregated to the project level in quarterly results reporting but will be collected at the activity level.	PIU	Annually	None	Number
Outputs: Increased land right formalization							
Output Indicator	Household land rights formalized*	Households receiving formal recognition of ownership and/or use rights through certificates, titles, leases, or other recorded documentation by government institutions or traditional authorities at national or local levels.	For this project, it is defined as households receiving formal recognition of ownership as a direct result of Property Rights Project action.	PIU and GASR	Quarterly (Starting Year 3)	Gender	Number



MCA-M M&E Plan

Output Indicator	Stakeholders Trained*	Number of public officials, traditional authorities, project beneficiaries and representatives of the private sector, receiving formal on-the-job land training or technical assistance regarding registration, surveying, conflict resolution, land allocation, land use planning, land legislation, land management or new technologies.	In Mongolia, this indicator counts unique individual stakeholders trained in at least one day-long session. This figure will be aggregated to the project level in quarterly results reporting but will be collected at the activity level	PIU	Quarterly (Starting Year 2)	Gender	Number
Output Indicator	Conflicts Successfully Mediated*	Resolution or mediation of disputed land and property rights undertaken by local authorities, contractors, mediators or courts with Compact support.	For this project, this includes property boundary disputes. The resolution of boundaries is not a goal of the project, and number of boundary issues is unknown. Thus, no target is set.	Capital and District Land Offices, PIU, Capital City Courts and Administrative Court	Annually	None	Number
Output Indicator	Parcels Corrected or Incorporated in Land System*	Number of parcels with relevant parcel information corrected or newly incorporated into an official land information system (this could be a system for the property registry, cadaster or an integrated system).	Already registered parcels that are corrected will not be counted here.	PIU and Contractor	Annually	None	Number
Output Indicator	Number of households reached	Number of landholders reached through reconnaissance work. Subject matters will include land on public servitude, land law, restriction zones.		PIU	Quarterly (Starting Year 2)	None	Number
Output Indicator	Land Administration Offices Established or Upgraded* *	The number of land administration and service offices or other related facilities that the project physically establishes or upgrades.	For this project, it is defined as when the GASR construction work is accepted by MCA.	PIU	Annually (Starting Year 3)	None	Number
Output indicator	Urban parcels mapped	Urban land parcels mapped through field survey and/or use of ortho-photography. The mapping process varies by project but may include clarification of property boundaries, demarcation, creation of cadastral records, verification of map by community stakeholders, and creation or updating of map-based land rights inventories and land use plans.		PIU and Contractor	Annually	None	Number



MCA-M M&E Plan

Process Milestones							
Process Milestone Indicator	Legislative and regulatory commission report submitted	Establish 9 members Commission to evaluate the legal, regulatory, bureaucratic and other issues, inefficiencies or obstacles that impact the ability of Mongolian citizen to privatize and register land in relatively efficient and cost effective manner.		PIU	Once	None	Date
Process Milestone Indicator	Building provided for registry office	1500 square meters of structurally and environmentally sound office space provided for the State Registry Central Office		PIU	Once	None	Date
Process Milestone Indicator	Design for registry office completed	Architectural plan should be completed in conjunction with business process analysis contractor		PIU	Once	None	Date
Process Milestone Indicator	Awareness and outreach campaign designed	Educating citizens about the importance of registering their hashaa plots and how to use land as an investment vehicle		PIU	Once	None	Date
Process Milestone Indicator	Satellite imagery procured	Procurement of high resolution satellite imagery for hashaa-plot mapping		PIU	Once	None	Date
Process Milestone Indicator	Continually Operating Reference Stations (CORS) operational	Continually Operating Reference Stations (CORS) are procured and installed		PIU	Once	None	Date
Process Milestone Indicator	Registry processes updated and operational	Registry processes are updated		PIU	Once	None	Date

*-Common Indicator

**_-New indicator added by 2011 M&E Plan Revision



Property Rights Project – Peri-Urban Land Leasing Activity

Indicator Type	Indicator	Definition ¹	Detailed Definition	Data Source/ Responsible Entity	Frequency	Disaggregation	Units
Outcome 1: Increased herder household income							
Outcome Indicator	Net earned income of herder households in Darkhan, Erdenet and UB	Net earned income of participating herder households including agricultural net income, wages, and other business profits (excludes government transfers and unearned income). Measures of 3 central areas.	Real total household earned income of the past 12 months at baseline surveys and follow-up surveys. Endline values will be adjusted for inflation using the Mongolian CPI and converted to USD using 1450MNT/USD. Participating households are those in lease awarded herder groups and actively participating in the project. The target of 17% growth is calculated as the level that yields an ERR of 16% (the 80th percentile of the ERR distribution). This 17% growth level includes 3% annual real income growth generally (across two years) and 11% higher income than the control group in Compact Year 5.	MCA Peri-Urban Rangeland Leasing Survey (PURLS)	Twice (Year 3 and 5)	Gender, Age and Income	2007 USD
Outcome Indicator	Net earned income of herder households in Choibalsan and Kharkhorin	Net earned income of participating herder households including agricultural net income, wages, and other business profits (excludes government transfers and unearned income). Measures of 2 more-remote areas.	Real total household earned income of the past 12 months at baseline surveys and follow-up surveys. Endline values will be adjusted for inflation using the Mongolian CPI and converted to USD using 1450MNT/USD. Participating households are those in herder groups awarded leases and actively participating in the project. The baseline data collection is about to	MCA Peri-Urban Rangeland Leasing Survey (PURLS)	Twice (Year 4 and 5)	Gender, Age and Income	2007 USD

¹All indicators are measured across all project areas, except as noted. Data will be collected as well by service provider self-reporting for comparison but not reported in the ITT.



MCA-M M&E Plan

			be conducted in 2012 Spring. The target of 14% growth is calculated as the level that yields an ERR of 16% (the 80th percentile of the ERR distribution). This 14% growth includes 3% annual real income growth generally (one year) and 11% higher income than the control group in Compact Year 5.				
Outcome Indicator	Net earned income of control households in Choibalsan and Kharkhorin	Net earned income of control group herder households including agricultural net income, wages, and other business profits (excludes government transfers and unearned income). Measures of 2 more remote areas.	Real total household earned income of the past 12 months at baseline surveys and follow-up surveys. Endline values will be adjusted for inflation using the Mongolian CPI and converted to USD using 1450MNT/USD. Participating households are those in herder groups awarded leases and actively participating in the project. The baseline data collection will be conducted in 2012 Spring. The target of 3% growth represents 3% annual real income growth. A control group is used as a comparison indicator for Choibalsan and Kharkhorin, as there is a randomized control group, unlike for Darkhan, Erdenet and UB.	MCA Peri-Urban Rangeland Leasing Survey (PURLS)	Twice (Year 4 and 5)	Gender, Age and Income	2007 USD
Outcome 2: Increased peri-urban herder productivity							
Outcome Indicator	Percent reduction in mortality rate of cattle in treatment versus comparison/control group, intensive farms	Percent reduction in mortality rate versus control or comparison group of cattle intensive farms. ²	Percent reduction in the mortality rate (accidental, natural causes and euthanasia) of treatment versus comparison (mortality comparison minus mortality treatment)/mortality comparison. Comparison	MCA Peri-Urban Rangeland Leasing survey (PURLS)	Twice (Year 3 or 4 and 5)	None	Percent

²The project seeks to reduce feed stress on animals by reducing competition for available fodder in a given area. Improved nutrition leads to stronger immune systems and greater ability to fight adverse climate, disease and parasites. Shelter provided for animals under the project will also reduce mortality related to exposure. Due to high inter-year variation and livestock deaths in “dzuds”, or bad winters, all mortality figures are calculated relative to the area average.



MCA-M M&E Plan

			group for UB, Darkhan and Erdenet areas are non-randomly selected comparison households, for Choibalsan and Kharkhorin areas the comparison is the randomly selected control group.				
Outcome Indicator	Percent reduction in mortality rate of cattle in treatment versus comparison/control group, semi-intensive farms	Herd mortality rate difference of project treatment to control or comparison groups for semi-intensive farms (cattle) ³	Percent reduction in the mortality rate (accidental, natural causes and euthanasia) of treatment versus comparison (mortality comparison minus mortality treatment)/ mortality comparison. Comparison group for UB, Darkhan and Erdenet areas are non-randomly selected comparison households, for Choibalsan and Kharkhorin aimags the comparison is the randomly selected control group.	MCA Peri-Urban Rangeland Leasing survey (PURLS)	Twice (Year 3 or 4 and 5)	None	Percent
Outcome Indicator	Percent reduction in mortality rate of sheep in treatment versus comparison/control group, semi-intensive farms	Herd mortality rate difference of project treatment to control or comparison groups for semi-intensive farms (sheep) ⁴	Percent reduction in the mortality rate of treatment versus comparison (mortality comparison minus mortality treatment)/ mortality comparison. Comparison group for UB, Darkhan and Erdenet areas are non-randomly selected comparison households, for Choibalsan and Kharkhorin aimags the comparison is the randomly selected control group.	MCA Peri-Urban Rangeland Leasing survey (PURLS)	Twice (Year 3 or 4 and 5)	None	Percent
Outcome Indicator	Liters of milk per cow, intensive farms	Annual average milk production (l) per cow on intensive farms ⁵	Amount of milk yield in non-milking period times non-milking period days plus amount of milk	MCA Peri-Urban Rangeland Leasing survey	Twice (Year 3 or 4 and 5)	None	Liters

³See footnote above.

⁴See footnote above.

⁵In addition to the improved condition of the female at calving as described under footnote 6, the supplemental forage production and the training in herd management under the intensive model will result in higher realization of the milk potential of cows in the herd. The project will not be financing any breeding program of participating herders to increase the milk potential of their cows, but the training may discuss these breeding issues.



MCA-M M&E Plan

			yield in milking period times milking period days. Average is calculated by taking the average across top and lowest producing cows by intensiveness in PURLS. Target assumes that there will be 25% compliance by compact year 5.	(PURLS)			
Outcome Indicator	Liters of milk per cow, semi-intensive farms	Average annual milk production (l) per cow on semi-intensive farms ⁶	Amount of milk yield in non-milking period times non-milking period days plus amount of milk yield in milking period times milking period days from semi-intensive farms. Target assumes that there will be 25% compliance by compact year 5.	MCA Peri-Urban Rangeland Leasing survey (PURLS)	Twice (Year 3 or 4 and 5)	None	Liters
Outcome 3: Optimize peri-urban rangeland carry capacity and range management							
Outcome Indicator	Number of herder groups limiting their livestock population to the carrying capacity of their leases on intensive farms in 3 central aimags	Number of intensive herder groups having no more than the maximum number of sheep units of livestock per 100 ha specified in their action plans ⁷	Mongolians count animals in reference to units of sheep as follows: 1 goat = 0.9 sheep units; 1 sheep = 1 sheep unit; 1 camel = 5.7 sheep units; 1 cow = 6 sheep units; and 1 horse = 6.6 sheep units. While most of the animals in intensive herds will be cattle, sheep units are used for measurement because of the uncertainty of the mix of animals that will actually make up participating herds.	PURP PIU Field Specialists	Annually (Starting Year 3)	None	Number
Outcome Indicator	Number of herder groups adopting hay making requirement/capacity for intensive farms	Number of intensive herder groups having hay and silage stored at beginning of winter season equivalent to at least 180 days of herd requirement or have a purchase order to	The amount of obligatory storage is specified in herder groups' action plans and will be collected by PIU Field Specialists.	PURP PIU's Field Specialist	Twice (Year 3 or 4 and 5)	None	Number

⁶Reduced feed stress results in better condition of the cow at calving time and therefore better milk producing capacity four to six weeks after calving, when peak milk yield potential is reached.

⁷



MCA-M M&E Plan

		complete delivery of this amount ⁸					
Outcome Indicator	Number of herder groups limiting their livestock population to the carrying capacity of their leases on semi-intensive farms	Number of semi-intensive herder groups having no more than the maximum number of sheep units of livestock per 100 ha specified in their action plan	Mongolians count animals in reference to units of sheep as follows: 1 goat = 0.9 sheep units; 1 sheep = 1 sheep unit; 1 camel = 5.7 sheep units; 1 cow = 6 sheep units; and 1 horse = 6.6 sheep units. While most of the animals in intensive herds will be cattle, sheep units are used for measurement because of the uncertainty of the mix of animals that will actually make up participating herds.	MCA Peri-Urban Rangeland Leasing survey (PURLS)	Twice (Year 3 or 4 and 5)	None	Number
Outcome Indicator	Number of herder groups adopting hay making requirements/capacity for semi-intensive farms	Number of semi-intensive herder households having hay and silage stored at beginning of winter season equivalent to at least 30 days of herd requirements, or have a purchase order to complete delivery of this amount ⁹	The amount of obligatory storage is specified in herder groups' action plans and will be collected by PIU Field Specialists.	PURP PIU's Field Specialists	Twice (Year 3 or 4 and 5)	None	Number
Outcome Indicator	Management effect, summer standing biomass ¹⁰	Average air-dry weight (in kg/ha) of total standing biomass of uncaged areas in treatment sites relative to uncaged areas in control sites at end of summer in Choibalsan and Kharkhorin, semi-intensive areas. ¹¹	Summer biomass is clipped in August. The expected outcome is that notwithstanding the adoption of more productive practices, the utilization level is not excessive, thus maintained. Standard deviation of ± 300 kg/ha is expected. Listed in 2011-12 M&E plan as TBD until survey is completed.	Peri-urban Land Quality and Productivity Survey	Twice (Year 3 or 4 and 5)	None	Kg/Ha

⁸Herd size expressed in sheep units times kilograms of feed per day. The need for supplementary feed in winter is unavoidable in Mongolia, so provision for that feed is an essential part of any land use plan by herders. Carrying capacity includes the winter needs of whatever animals are part of the capacity figure.

⁹Similar rationale to that stated in previous footnote.

¹⁰ Standing biomass data collection for the existing areas failed when the cages our contractor installed for measurements were broken.

¹¹Baseline measurements of productivity were not collected successfully for control sites in UB, Darkhan, and Erdenet. Thus, this measure is only for Choibalsan and Kharkhorin.



MCA-M M&E Plan

Outcome Indicator	Management effect, winter standing biomass	Average air-dry weight (in kg/ha) of total standing biomass of uncaged areas in treatment sites relative to uncaged areas in control areas at end of winter in Choibalsan and Kharkhorin ¹²	Winter biomass is clipped in April. The expected outcome is that notwithstanding the adoption of more productive practices, the utilization level is not excessive, thus maintained. Standard deviation of ± 300 kg/ha is expected. Listed in 2011-12 M&E plan as TBD until survey is completed.	Peri-urban Land Quality and Productivity Survey	Twice (Year 3 or 4 and 5)	None	Kg/Ha
Outcome indicator	Weight gain ¹³ (cattle)	Average live weight gain across male cattle of twelve to eighteen months of age.	In Spring 2012, male cattle represented from the herd will be weighed for the first time, and again in Spring 2013 when they reach twenty four to thirty months. Age relies on herder memory rather than teething. Listed in 2011-12 M&E plan as TBD until survey is completed.	Peri-urban Livestock Health Survey	Twice (Spring 2012 and Spring 2013)	None	
Outcome indicator	Weight gain (sheep)	Average live weight gain across male sheep of twelve to eighteen months of age.	In Spring 2012, male sheep represented from the herd will be weighed for the first time, and again in Spring 2013 when they reach twenty four to thirty months. Age relies on herder memory rather than teething. Listed in 2011-12 M&E plan as TBD until survey is completed.	Peri-urban Livestock Health Survey	Twice (Spring 2012 and Spring 2013)	None	
Outputs:							
Output Indicator	Leases awarded	Number of leases signed with herder groups	If a herder group comprising of 2 households have one quit (death, migration and annulment of membership etc.), the remaining one household cannot stay as a herder group and therefore will be omitted. This cumulative figure might decrease over time. This can be a denominator to calculate percentage	MCA-Mongolia PURP PIU	Annual (Years 3 through 5)	None	Number

¹²See note above.

¹³ Baseline and targets will be defined when Livestock Health Survey is conducted.



MCA-M M&E Plan

			of the Outcome indicators.				
Output Indicator	Leases awarded (female-headed households)	Number of leases signed with herder groups	If a herder group comprising of 2 households have one quit (death, migration and annulment of membership etc.), the remaining one household cannot stay as a herder group and therefore will be omitted. It should be noted that this indicator does not account for expected effects on female beneficiaries who co-head households with males and should not be seen as the sole measure of benefits for female herders.	MCA-Mongolia PURP PIU	Annual (Years 3 through 5)	Gender	Number
Output Indicator	Leases awarded (male/female members in co-headed households)	Number of leases signed with male/female members in co-headed households of Herder Groups in Choibalsan and Kharkhorin.	In the Choibalsan and Kharkhorin a co-signatory requirement was added so that both spouses within a household formally sign off on the lease. This indicator is meant to capture this emphasis on joint decision making within the household. It is distinct from the indicator above which measures benefits between rather than within households.	MCA-Mongolia PURP PIU	Twice (Year 3 and 4)	Gender	
Output Indicator	Household land rights formalized*	The number of households receiving formal recognition of ownership and/or use rights through certificates, titles, leases, or other recorded documentation by government institutions or traditional authorities at national or local levels. This can include secondary rights.	Disaggregated from the herder groups that were awarded with leases (e.g. 1 herder group = multiple households)	MCA-Mongolia PURP PIU	Twice (Year 3 and 4)	None	Number

*Common Indicator



MCA-M M&E Plan

		The formalization process varies by project but can include the recordation or registration of a customary or informal right, as well as the regularization or adjudication of rights.					
Output Indicator	Wells completed	Number of wells completed and accepted by MCA-Mongolia on land leases	The handout ceremony where PIU, Herder Group, Well Contractor and the Monitoring contractor all attend is the threshold of MCA-M acceptance.	MCA-Mongolia PURP PIU	Quarterly (Starting Year 3)	None	Number
Output Indicator	Stakeholders trained*	Number of public officials, traditional authorities, project beneficiaries and representatives of the private sector, receiving formal on-the-job training or technical assistance regarding registration, surveying, conflict resolution, land allocation, land use planning, land legislation, land management or new technologies. The curricula, length, method and intensity of training programs vary from compact to compact and may include workshops, seminars, study trips, or courses.	The length of training is defined by the topic and is normally half a day. With the objective of training as much people as possible, number of participants are counted as how many were trained, as opposed to how many times they were trained.	MCA-Mongolia PURP PIU	Quarterly (Starting Year 2)	Gender	Number
Output Indicator	Number of legal and regulatory reforms adopted*	The number of specific pieces of legislation or implementing regulations adopted by the compact country and attributable to compact support. To date, adopted reforms have focused on amendments to	Animal Husbandry Policy Implementation Department of Ministry of Food, Agriculture and Light Industry is the focal point of the implementation for the PIU. This is a common indicator and not a project objective, so no targets are set.	MCA-Mongolia PURP PIU	Once	None	Number



MCA-M M&E Plan

		existing property and land laws, and on new land tenure laws and regulations, including recognition of land rights for women, communities and informal settlements					
Output Indicator	Conflicts successfully mediated*	The number of disputed land and property rights cases that have been resolved by local authorities, contractors, mediators or courts with compact support. This may include resolution of property border disputes, disputes over existing ownership, and disputes over the right to own, inherit, use or access the property or land-based resource.	Collected from Dispute Registry by Dispute Resolution Manager, as per Complaint Resolution Procedure. This is a common indicator and not a project activity, so no targets are set.	MCA-Mongolia PURP PIU	Annually (Starting Year 3)	None	Number
Output Indicator	Repayment rate by the leaseholders	Percentage of payments collected from herder groups on time (disaggregated by peri-urban area and intensive/semi-intensive)	Field Specialists track the progress through local development funds, to which the repayments are made	MCA-Mongolia PURP PIU	Year 4 and 5	None	Percent
Output Indicator	Repayment rate by the leaseholders (Female)	Percentage of payments collected from female-headed herder groups on time (disaggregated by peri-urban area and intensive/semi-intensive)	Field Specialists track the progress through local development funds, to which the repayments are made	MCA-Mongolia PURP PIU	Year 4 and 5	Gender	Percent
Process Milestones							
Process Milestone Indicator	Legal and regulatory commission report prepared	Report presenting research on legislation and regulations related to rangeland leasing and identify the proposed changes submitted to MCA-Mongolia by the commission		MCA-Mongolia PURP PIU	Once	None	Date



MCA-M M&E Plan

Process Milestone Indicator	Applications to lease land submitted by herder groups (Ulaanbaatar, Darkhan and Erdenet)	Land lease applications submitted to the local selection commissions by herder groups in the Ulaanbaatar, Darkhan and Erdenet peri-urban areas.		MCA-Mongolia PURP PIU	Once	None	Date
Process Milestone Indicator	Applications to lease land submitted by herder groups (Choibalsan and Kharkhorin)	Land lease applications submitted to the local selection commissions by herder groups in the Choibalsan and Kharkhorin peri-urban areas.		MCA-Mongolia PURP PIU	Once	None	Date
Process Milestone Indicator	Selection of herder groups to receive land leases, and lease signing (Ulaanbaatar, Darkhan and Erdenet)	Herder groups selected to receive land leases, and leases signed between herder groups and local governments in the Ulaanbaatar, Darkhan and Erdenet peri-urban areas.		MCA-Mongolia PURP PIU	Once	None	Date
Process Milestone Indicator	Selection of herder groups to receive land leases, and lease signing (Choibalsan and Kharkhorin)	Herder groups selected to receive land leases, and leases signed between herder groups and local governments in the Choibalsan and Kharkhorin peri-urban areas.		MCA-Mongolia PURP PIU	Once	None	Date
Process Milestone Indicator	Final GIS database and maps prepared (Ulaanbaatar, Darkhan, and Erdenet)	GIS database and maps identifying the land tracts to be leased prepared and submitted to MCA-Mongolia by the rangeland mapping contractor in the Ulaanbaatar, Darkhan and Erdenet peri-urban areas.		MCA-Mongolia PURP PIU	Once	None	Date
Process Milestone Indicator	Final GIS database and maps prepared (Choibalsan and Kharkhorin)	GIS database and maps identifying the land tracts to be leased prepared and submitted to MCA-Mongolia by the rangeland mapping		MCA-Mongolia PURP PIU	Once	None	Date



MCA-M M&E Plan

		contractor in the Choibalsan and Kharkhorin peri-urban areas.					
Process Milestone Indicator	Training carried out	Training of herder groups and local government officials on rangeland management, livestock management, business and marketing, and other topic carried out by the training contractor.		MCA-Mongolia PURP PIU	Annually (Starting Year 3)	None	Date
Process Milestone Indicator	Materials for fencing and animal shelters provided (Ulaanbaatar, Darkhan and Erdenet)	Herder groups take physical possession of materials for fencing and animal shelter from materials suppliers in the Ulaanbaatar, Darkhan and Erdenet peri-urban areas.		MCA-Mongolia PURP PIU	Once	None	Date
Process Milestone Indicator	Materials for fencing and animal shelters provided (Choibalsan and Kharkhorin)	Herder groups take physical possession of materials for fencing and animal shelter from materials suppliers in the Choibalsan and Kharkhorin peri-urban areas.		MCA-Mongolia PURP PIU	Once	None	Date
Process Milestone Indicator	Wells constructed in Ulaanbaatar, Darkhan, Erdenet, Choibalsan and Kharkhorin	MCA-Mongolia accepts delivery of wells constructed by its contractors		MCA-Mongolia PURP PIU	Once	None	Date

*-Common Indicator

**.-New indicator added by 2011 M&E Plan Revision



Vocational Education Project

Indicator Type	Indicator	Brief Definition or Common Indicator Definition	Detailed or Specific Definition	Data Source/ Responsible Entity	Frequency	Disaggregation	Units
Objective 1: Increased income							
Objective Indicator	Annual salary	Average annual salary of employed graduates who completed new curriculum after graduation	The estimate will include only the graduates graduated from the schools receiving project assistance and included in survey. AVET statistics on graduates will be ready by 15 February and 15 July each year.	MCA-M&E Survey of graduates	Twice (Year 4 and 5)	Gender	2007 USD
Objective 2: Increased employment							
Objective Indicator	Rate of employment	Employment rate of graduates who completed new curriculum after graduation	The estimate will include only the graduates graduated from the schools received project assistance. AVET statistics on graduates will be ready by 15 February and 15 July each year.	MCA-M&E Survey of graduates	Twice (Year 4 and 5)	Gender	Percent
Outcome: Improved quality and relevancy of TVET system							
Outcome Indicator	Non-governmental funding for vocational education	Percentage of non-governmental funding out of all funding vocational education institutions receive annually through public-private partnership activities	This indicator includes data from three sources: a) AVET data on nationwide investment made by private companies such as OT, etc. b) PIU data on private investments through PIU PPP Grant Program. AVET data can be obtained once a year by 25 February. PIU Grant data will be provided semi-annually.	AVET, TVET PIU and its Contractor and MCA-M M&E School Administrative Survey	Annually (Starting Year 2)	None	Percent
Outcome Indicator	Graduates from MCC-supported educational facilities*	The number of students graduating from the highest grade (year) for that educational level in MCC-supported educational facilities.	The AVET data on number of students graduating from vocational schools will be disaggregated by schools and trades. The data can be obtained from AVET by 15 February and 15 July every year.	AVET and MCA M&E Graduates Survey	Annually (Starting Year 4)	Gender	Number



MCA-M M&E Plan

Outcome Indicator	Students participating in MCC-supported education activities*	Total number of students enrolled or participating in MCC-supported educational programs.	AVET data can be obtained from AVET by 15 October.	AVET, TVET PIU and MCA M&E School Administrative Survey	Annually (Starting Year 4)	Gender	Number
Outcome Indicator	Certified vocational education teachers	Percent of total teaching staff which has successfully completed the certification exam	Total number of teachers successfully completed the certification exam at the end of the training. At the end of trainings, PIU will provide information on teachers who received certification.	TVET PIU and its Contractor	Annually (Starting Year 3)	Gender and Age	Percent
Outcome Indicator	Employed graduates of MCC-supported education activities*	Number of MCC-supported training program graduates employed in their field of study– as defined in the Compact’s M&E Plan - within one year after graduation.	This indicator will be reported in two figures: i) real figure and ii) projection figure. Real figures will be drawn from the data collected through MCA-M&E Survey of Graduates, which includes 10 schools participating in the impact evaluation study. The real figures will be used to estimate the projection across all vocational schools in Mongolia. The field of study is interpreted in a general sense responding to the PIU trade cluster for curriculum development activity.	MCA – M&E Survey of Graduates	Annually (Starting Year 4)	Gender	Number
Outputs:							
Output Indicator	Instructors trained*	Total number of instructors who complete MCC-supported training focused on instructional quality as defined by the Compact training activity (e.g. training in improved pedagogical methods, delivering revised curricula, etc.)	PIU will provide information at the end of trainings. Teacher training conducted under Grant Program activities will also be included.	TVET PIU and its Contractor	Quarterly (Starting Quarter 12)	Gender	Number
Output Indicator	Educational facilities constructed or rehabilitated*	Number of unique educational facilities constructed, rehabilitated, and / or equipped according to standards stipulated	This indicator includes the schools receiving assistance for educational facilities constructed, rehabilitated and/ or	TVET PIU	Quarterly (Starting Quarter 11)	Gender	Number



MCA-M M&E Plan

		in MCA contracts signed with implementers.	equipped.				
Output Indicator	Percent of active teachers receiving certification training	Percent of teachers actively receiving certification training regardless of pass/fail status	Percentage of teachers who are actively receiving the training and have not yet completed the certification exam will be reported here. Percentage will count all teachers received and receiving certification training will be included.	TVET PIU	Annually (Starting Year 3)	Gender	Percent
Output Indicator	Legal, financial, and / or policy reforms adopted*	Number of reforms adopted by the public sector as defined in the Compact, Disbursement Agreement, or Program Implementation Agreement (PIA) that increase the education sector's capacity to improve access, quality, and /or relevance of education at any level, from primary to tertiary / vocational.	This will only include major reforms such as Law on TVET, Establishment of NCVET, etc. All other minor documents which are issued by NCVET, AVET will not be reported.	TVET PIU and AVET	Annually	None	Number
Output Indicator	Number of practical training sites upgraded	Number of existing practical training sites upgraded with new technologies under the TVET project	Additional information will be obtained from PIU on Grant Program. This will be the sum of practical training sites upgraded by project and private partners as a result of grant program.	TVET PIU	Annually (Starting Year 3)	None	Number
Output Indicator	Number of PPP agreements established	Number of active partnership level agreements established between TVET institutions and employers as a result of PPP grants and grant related activities	Figure includes partnerships that involve constant cooperation in various forms such as on-site training for teachers, on-site training for students, developing curriculum, investing in school to upgrade practical training sites or teaching materials, etc. PIU will provide information related to PPP Grants.	AVET and TVET PIU and its Contractor	Annually (Starting Year 2)	None	Number
Output Indicator	Change in proportion of families by income statements: High Income/Mid	Proportion of families with family member who graduated from TVET by income	This will be reported by the income level analyzed based on the income statements provided by the main respondents of	TVET PIU and Public Perceptions Survey Contractor	Twice (Year 2 and 5)	Income	Percentage



MCA-M M&E Plan

	Income/Low Income**		Public Perceptions Survey.				
Output Indicator	Public awareness of TVET**	Percentage of main respondents' awareness of TVET	The household's attitude and opinion on TVET will be represented by the main respondent.	VET PIU and Public Perceptions Survey	Twice (Year 2 and 5)	None	Percentage
Output Indicator	Knowledge of local TVET provider**	Percentage of respondents who have knowledge of local TVET providers		VET PIU and Public Perceptions Survey Contractor	Twice (Year 2 and 5)	None	Percentage
Output Indicator	TVET quality assessment**	Percentage of individuals' opinions on TVET quality assessment compared to other institutions		VET PIU and Public Perceptions Survey Contractor	Twice (Year 2 and 5)	None	Percentage
Output Indicator	Expression of interest in TVET**	Percentage of individuals in age group from 14-24 that expressed interest in TVET		VET PIU and Public Perceptions Survey Contractor	Twice (Year 2 and 5)	None	Percentage
Process Indicator							
Process Indicator	Value of educational facility construction, rehabilitation, and/or equipping contracts signed*	Value of signed contracts for educational facility construction, rehabilitation, and/or equipping (e.g. information technology, desks and chairs, electricity and lighting, water systems, latrines). If the value of the contract changes, the total amount of the contract value should be reported in the quarter that the change occurred. Cost sharing by others (e.g., co-financing by other donors or government) should not be included.		MCA Fiscal team and VET PIU	Quarterly (Starting Quarter 8)	None	US Dollars (2007)
Process Indicator	Value of construction, rehabilitation, and/or equipping contracts	The aggregate amount disbursed divided by all signed contracts for education facility works and/or equipping. Denominator		MCA Fiscal team and VET PIU	Quarterly (Starting Quarter 10)	None	US Dollars (2007)



MCA-M M&E Plan

	disbursed*	= Value of signed contracts for educational facility works/equipping as defined above. Numerator = Amount of money disbursed on the signed contracts for education facility works/equipping. This is a proxy indicator for physical completion of education facility works. However, since the numerator includes industry standard advance payments and mobilization fees, it does not correlate perfectly with physical progress.					
Process Indicators	MOU signed with MECS and MSWL	MOU outlining roles and responsibilities of MECS, MLSW and MCA-Mongolia for TVET project implementation		MCA-Mongolia	Once	None	Date
Process Indicators	NCVET established	National Council for Vocational Education and Training is policy-making organization for TVET.		MECS and MLSW	Once	None	Date
Process Indicators	TVET legislation passed	New Law on TVET is under discussion by the Parliament. The Law establishes a new national policy framework for TVET.		Parliament of Mongolia and PIU	Once	None	Date
Process Indicators	Labor Market Assessment completed	Labor market study will determine Employers' need for skilled workforce and capacity of TVET institutions to meet labor market demand.		Labor market survey Contractor	Once	None	Date
Process Indicators	TORs finalized for creating new curricula and for establishing a media support center	TORs for the development of new curricula of 30 trades, based on industrial needs and competency standards.		TVET PIU	Once	None	Date
Process Indicators	Inspection and Assessment of equipment and	Selection of the TVET schools of which equipment and infrastructure will be improved.		TVET PIU	Once	None	Date



MCA-M M&E Plan

	infrastructure improvement needs completed						
Process Milestone Indicators	Public Outreach plan developed	Contract for public awareness and outreach campaign will be awarded.		TVET PIU	Once	None	Date

*-Common Indicator

**_-New indicator added by 2011 M&E Plan Revision



Health Project

Indicator Type	Indicator	Definition	Detailed description	Data Source/ Responsible Entity	Frequency	Disaggregation	Units
Objective: Reduced risk of premature death and disability from NCDs							
Objective indicator	Prevalence of reduced Sodium intake	Percent of sampled population aged 25 – 64 with reduced sodium content in 24 hr urine sample	The study conducted only in pilot regions for the age group 25-64 years old	Salt survey WHO	2011, 2013	Gender	Percent
Objective indicator	Prevalence of high blood sugar	Percent of sampled population aged 40 – 64 with measured blood sugar levels above 6.1 mmol/L	People with blood glucose levels above 6.1 mmol/L. The denominator is the number of people in age group 40-64 years	STEPS	2009, Dec 2013	Gender ¹⁷	Percent
Objective indicator	Prevalence of hypertension	Percent of sampled population aged 40– 64 with measured blood pressure levels above 140/90 mm Hg	People with blood pressure levels above 140/90 mm Hg. Denominator is the number of people in age group 40-64 years	STEPS	2009, Dec 2013	Gender ¹⁷	Percent
Objective indicator	Exposure to second-hand smoke	Self-reported rate of people exposed to second-hand smoke	Exposure to second-hand smoke at workplace	STEPS	2009, Dec 2013	Gender ¹⁷	Percent
Objective indicator	Screening for diabetes**	Percent of people aged 40-64, who are screened for diabetes	Currently there is no baseline data on people screened, because the term “screening” is new for the system. We are aiming to cover under this screening more than 60 percent of target population during the life of the project. Target group selected according to approved screening strategy	DoH	2009, 2013	Gender	Percent
Objective indicator	Screening for hypertension**	Percent of people aged 40-64, who screened for arterial hypertension	Data will be obtained through official reporting channels because screening forms will be approved by Minister and implemented in all health facilities	DoH	2009, 2013	Gender	Percent



MCA-M M&E Plan

Objective indicator	Prevention of cervical cancer through HPV vaccination**	Percent of girls aged 11-15 vaccinated by Gardasil vaccines	10 percent of girls aged 11-15 nationwide will be vaccinated against HPV.	PIU	2009, 2013	Gender	Percent
Objective indicator	Productive years of workforce	Disability adjusted life-years (DALY) related to NCDs ¹⁴	DALY=Years of life lost+years of life disabled. GoM will estimate it starting from 2012. No baseline data available.	Department of Health (DoH), (starting 2012)	2012; 2013	Gender	Year
Objective Indicator	Traffic accident reduction	Average severity index at seven selected accident black spots in UB.	Black spots are those with bad traffic safety situation. Under the weighted Severity Index Method casualties have been divided into three groups: light, severe injuries and death, with each given certain weights that would be later indexed. In most countries severity index method is weighed[1]at 1, 3 and 5 with the formula. $P=(X+3)*(Y+5)*Z$ Where x—is light injury, y-severe injury and z-is death.	Black spot survey	2009; 2012	None	Rate
Objective Indicator	High risk for NCDs	Percentage of STEPS respondents aged 15 – 64 with three or more risk factors	Three risks from the following five: current daily smokers, less than 5 servings of fruit and vegetable per day, low level of activity, overweight, raised blood pressure	STEPS	2009; Dec 2013	Gender ¹⁷	
Outcome 1: Improved National and Local Response to NCDI							
Outcome Indicator	State budget allocated to NCDs	State budget allocated for NCD	Currently the Health promotion fund budget reflected in figures, however we should determine which line items from the budget	MoH	2009; 2012	None	Thousands USD

¹⁴ Measurable changes for DALYs are expected primarily post-compact.



MCA-M M&E Plan

			related to NCDs Target source PIA amendment 2010				
Outcome Indicator	Local government spending towards NCDs	Amount of budget allocated by local authorities for the National NCD program	Data will be obtained from official source after defining which line item to include	MoH	Annually	None	USD
Outcome 2: Increased understanding of NCDI Prevention							
Outcome Indicator	Smoke free places**	Number of smoke free schools, hospitals, workplaces and businesses	Data was not reported officially, in each local area they allocate special certificate for this activity, so it is possible to obtain numbers from local health authorities. Data will be reported starting from Jan 2012	DoH	2009, 2013	None	Number
Outcome Indicator	Awareness of working population related to NCD prevention	Percent of people who know about the harms of at least three NCD-related risk factors		KAP of general public	2010, 2013	Gender	Percent
Outcome 3: Increased availability of sound NCDI services							
Outcome indicator	Early detection of cervical cancer	Percent of cervical cancer cases diagnosed in 1 st or 2 nd stages		DoH	2009, 2013	Gender	Percent
Objective Indicator	Sound NCD services	Percent of PHC facilities (FGP and soum hospitals) that offer high quality NCDI services	High quality NCD service is defined as meeting all four of the following criteria: trained staff, presence of educational materials, clinical guidelines and basic equipment at the PHC facilities...As defined in FBIS survey instrument	FBIS	2009, 2013	None	Percent
Outcome Indicator	Screening for cervical cancer	Percent of Mongolian women aged 30 – 60 who have ever been examined through PAP for cervical cancer		STEPS	2009 Dec 2013	Gender ¹⁷	Percent
Outputs:							
Output Indicator	Capacity of health staff	Number of health staff received training in NCDI from the health project	Unique person	EPOS/TLC	Quarterly	Gender	Number
Output	Capacity of school	Number of health education		Training reports	Annually	None	Number



MCA-M M&E Plan

Indicator	teachers **	teachers participating in trainings on NCD prevention					
Output Indicator	Capacity built in stroke and AMI	Number of staff (doctors, nurses) in stroke and cardiac care units trained in improved approaches abroad	Health staff from 2 target hospitals in UB will be trained abroad for 3-12 months	WHO	Once in 2012	Gender	Number
Output Indicator	Emergency response for stroke and AMI	Number of functional stroke and myocardial infarction units established or reorganized		WHO	Annually	None	Number
Output Indicator	Civil society mobilization	Amount of funding for grants awarded for NCDI activities		EPOS	Annually	None	thousands USD
Output Indicator	Mobilization of workplaces cooperation on NCDI prevention**	Number of completed grants on health promoting workplaces and health promoting settings		EPOS	Annually	None	Number
Output Indicator	Improved preparation for traffic accidents	Number of non-medical staff trained on basic life support		Training reports	Annually	None	Number
Output Indicator	Hospitals that treat cervical cancer**	Percent of secondary level hospitals offering the services on treatment of cervical cancer abnormalities (LEEP, colposcopy)	Secondary level hospitals which have trained staff, clinical guidelines and special equipment for the treatment of cervical cancer	FBIS	2010; 2012	None	Percent
Output Indicator	Provision of health education materials**	Number of printed and distributed posters, brochures, leaflets, stickers by the health project	Only health education materials provided by the health project included here	BCC	Annually	None	Number
Output Indicator	Availability of health education materials**	Percent of PHC facilities which have at least two types of health education materials available	This would ensure that health education materials available at primary level facilities for the public	FBIS	2010; 2013	None	Percent
Process Milestones¹⁸							
Process Milestone Indicator	First wave of Facility-based Impact Study (FBIS) data collections conducted	Study to identify progress of health facilities' implementation of NCD prevention and early detection measures conducted.		EPOS	2010; 2013	None	Aug 2010
Process Milestone Indicator	Recommendations on road safety interventions	Study on road traffic injuries conducted and recommendations developed in		EPOS and National traffic working group	Once	None	April 2010



MCA-M M&E Plan

	available	consensus with relevant stakeholders.					
Process Milestone Indicator	National NCDI communication strategy revised and updated	Strategy on National NCDI communication updated and agreed.		EPOS, PIU and MoH	Once	None	May 2010
Process Milestone Indicator	Curriculum for in-service and pre-service trainings completed.	Curriculum for in-service and pre-service trainings completed.		EPOS	Once	None	Nov 2010,
Process Milestone Indicator	Training of trainers completed	Training of Trainers completed		EPOS	Once	None	April 2011
Process Milestone Indicator	Grants awarded	a. First Round of Grants announced, potential applicants selected and awarded b. Subsequent Rounds of Grants awarded		EPOS and PIU	Three times	None	June 2010, June 2011, June 2012
Process Milestone Indicator	RNA completed	Surveys completed, final reports submitted and accepted		EPOS	Once	None	March 2010
Process Milestone Indicator	Training contract awarded	Contractor which organises training country-wide selected and contract awarded		PIU	Once	None	Oct 2010
Process Milestone Indicator	IEC/BCC contract awarded	IEC/BCC contractor selected and contract awarded		PIU	Once	None	Oct 2010
Process Milestone Indicator	NCD screening started	NCD screening started country-wide		PIU	Once	None	Jul 2011
Process Milestone Indicator	All study tours completed	Study Tour Activity Completed		PIU	Once	None	May 2013
Process Milestone Indicator	IC Contract awarded	IC Contract awarded		PIU	Once	None	Jan 2009



MCA-M M&E Plan

Process Milestone Indicator	Recommendation on National strategy for salt reduction**	Recommendation on National strategy for salt reduction completed		WHO	Once	None	Jun 2011
-----------------------------------	--	--	--	-----	------	------	----------

*-Common Indicator

**.-New indicator added by 2011 M&E Plan Revision



North-South Road Project

Indicator Type	Indicator	Definition	Detailed Definition	Data Source/ Responsible Entity	Frequency	Disaggregation	Units
Objective: More efficient transport for trade and access to services							
Objective Indicator	Vehicle operating cost saving*	The VOC is calculated from a composite of vehicle use cost prices (e.g., parts, wear and tear, fuel consumption, etc.) that are a function of road conditions, to obtain a cost per km to the driver. This is multiplied by traffic volume for total savings.	VOC savings target includes only normal traffic and not induced traffic.	Roads department survey	Year 5	None	USD
Outcome1: Increased traffic							
Outcome Indicator	Average annual daily traffic*	The average number of vehicles per day, averaged over different times (day and night) and over different seasons to arrive at an annualized daily average. (Weighted average across two separate sections, Ulaanbaatar-Nalaikh and Choir-Sainshand/ 35 th RW Crossing)	AADT of Ulaanbaatar-Nalaikh and Choir-Sainshand/35 th RW Crossing will be specifically	Roads department survey	Year 5	None	Number of Vehicle
Outcome 2: Decreased travel time							
Outcome Indicator	Travel Time	Total time to drive from Ulaanbaatar to Zamiin-Uud (including non-project sections). It is considered in terms of passenger hours during working and nonworking time, and cargo holding hours		Roads department	Year 5	None	Hours & minutes
Outcome 3: Decreased road roughness							
Outcome Indicator	Roughness*	The measure of the roughness of the road surface, in meters of height per kilometer of distance traveled. This is measured by either an International Roughness Index (IRI) machine or taking the maximum speed that a vehicle can travel on a road and finding the corresponding roughness	There is no baseline that specifically measured AADT of Ulaanbaatar-Choir-Sainshand/ 35 th RW Crossing	Roads department	Year 5	None	IRI unit



MCA-M M&E Plan

		measure. The lower the value, the smoother the road. Typically, a paved road will have an IRI of 3 or lower, while an impassible road will have an IRI greater than 14.					
Process/Output Indicators:							
Process Indicator	Kilometers of roads under design*	The length of roads in kilometers under design contracts. This includes designs for building new roads and reconstructing, rehabilitating, resurfacing or upgrading existing roads.	Contractually promised designs' total length, in km, will be inserted, as opposed to putting design output process.	PIU	Quarterly (Starting Quarter 8)	None	km
Process Indicator	Value of signed road feasibility and design contracts*	The value of all signed feasibility, design, and environmental contracts, including resettlement action plans, for road investments using 609(g) and compact funds. If the value of a contract changes, the total contract value should be reported in the quarter that the change occurred. Costs associated with pre-feasibility, supervision or management should not be included.	Terminated/invalid contracts as of the recording date are not included, unless the reporting quarter saw any disbursement.	MCA Fiscal Team	Quarterly (Starting Quarter 7)	None	USD (2007)
Process Indicator	Value disbursed of road feasibility and design contracts*	The value disbursed of all signed feasibility, design, and environmental contracts, including resettlement action plans, for road investments using 609(g) and compact funds.	Terminated/invalid contracts as of the recording date are not included, unless the reporting quarter saw any disbursement.	MCA Fiscal Team	Quarterly (Starting Year 3)	None	USD (2007)
Process Indicator	Value of signed road construction contracts*	The value of all signed construction contracts for new roads or reconstruction, rehabilitation, resurfacing or upgrading of existing roads using compact funds. If the value of a contract changes, the total contract value should be reported in the quarter that the change occurred. Cost sharing by others (e.g., the non-MCC funding component of any co-financing with other donors or government) should	Terminated/invalid contracts as of the recording date are not included, unless the reporting quarter saw any disbursement.	MCA Fiscal Team	Quarterly (Starting Quarter 7)	None	USD (2007)



MCA-M M&E Plan

		not be included. Costs associated with supervision or management should not be included.					
Process Indicator	Value disbursed of road construction contracts*	The value disbursed of all signed construction contracts for new roads or reconstruction, rehabilitation, resurfacing or upgrading of existing roads. This is a proxy indicator for physical completion of road works. However, since it includes industry standard advance payments and retention fees, it does not correlate perfectly with physical progress.	Terminated/invalid contracts as of the recording date are not included, unless the reporting quarter saw any disbursement.	MCA Fiscal Team	Quarterly (Starting Year 3)	None	USD (2007)
Process Indicator	Kilometers of roads under works contracts*	The length of roads in kilometers under works contracts for construction of new roads or reconstruction, rehabilitation, resurfacing or upgrading of existing roads.		MCA	Quarterly (Starting Year 3)	None	Km
Output Indicator	Number of workforce trained on trafficking in persons, health and safety, and HIV/AIDS and STIs	PIU conducts a day length training to contractor employees on trafficking in persons, health and safety, and HIV/AIDS and STIs		MCA NS Road PIU	Yearly (Starting Year 3)	Gender	Number
Output Indicator	Kilometers of roads completed*	The length of roads in kilometers on which construction of new roads or reconstruction, rehabilitation, resurfacing or upgrading of existing roads is complete (certificates handed over and approved).	Change is recorded only when the road construction of a segment is completed.	MCA	Quarterly (Starting Year 5)	None	Km
Process Milestones							
Process Milestone Indicator	Construction contract for Choir-Sainshand road signed	Contract for the construction of Choir-Sainshand road signed	MCA		Once	None	Date
Process Milestone Indicator	Supervision contract signed	Contract for the construction of Choir-Sainshand road signed	MCA		Once	None	Date
Process Milestone Indicator	ESIA approved for UB-Nalaikh Road Segment	EA/EMP conducted and report received in UB-Nalaikh Road Segment	MCA		Once	None	Date



MCA-M M&E Plan

Process Milestone Indicator	Design Build Contract Signed for UB-Nalaikh road segment	Contract for the design build for the UB-Nalaikh road segment signed	MCA	Once	None	Date
-----------------------------------	---	---	-----	------	------	------



Energy and Environment Project

Indicator Type	Indicator	Brief Definition	Specific Definition	Data Source/ Responsible Entity	Frequency	Disaggregation	Units
Outcomes:							
Outcome Indicator	Percent Difference in PM Emissions, Homes	% Decrease in Total PM Emissions Subsidized vs Traditional Gers and Houses	% Decrease in Total PM Emissions Subsidized vs Traditional Gers and Houses	Baselines and Targets MUST; 2012 actuals MCC IE contractor in 2012. 2013 entity TBD ¹⁵	June 2012, June 2013	None	Percentage
Outcome Indicator	Absolute Difference in PM Emissions, Homes	Absolute Decrease in Total PM Emissions Subsidized vs Traditional Gers and Houses	Absolute Decrease in Total PM Emissions Subsidized vs Traditional Gers and Houses	Baselines and Targets MUST; 2012 actuals MCC IE contractor in 2012. 2013 entity TBD ¹⁶	June 2012, June 2013	None	Tonne (Metric)
Outcome Indicator	Percent Difference in median fuel costs	Decrease in median annual heating and cooking fuel costs for subsidized homes versus nonparticipating homes (no subsidized products).	Decrease in median annual heating and cooking fuel costs for subsidized homes versus nonparticipating homes (no subsidized products).	NEXANT-MMCG 2010 survey, MCA-M&E contractor, product sales from PIU ¹⁷	June 2012, June 2013	None	Percentage

¹⁵ Baseline and target estimates based on 2010-11 MUST laboratory and field data to estimate outdoor PM emissions from traditional and all project subsidized stoves in gers. Estimate represents heating season from October 1-April 1. Actuals based on collection by MCC IE contractor in 2012. Includes houses, while baseline does not. Subsidized gers may include gers that also purchase insulation or vestibules. Actual calculations may be revised retroactively based on improved measurements.

¹⁶ Same as above.

¹⁷ median annual heating and cooking fuel costs from NEXANT-MMCG 2010 survey for baseline. MCA-M&E ger stove behavioral survey for actuals. Project-subsidized stove sales information from PIU. Estimated participating household fuel-related costs across project districts during the heating season (October 1-April 1). Nonparticipating households have traditional stoves and no subsidized products with two layers of insulation.



MCA-M M&E Plan

Outcome Indicator	Percent Difference in PM Emissions from HOB sites**	Decrease in Total PM Emissions Subsidized vs Traditional HOB sites	Decrease in Total PM Emissions Subsidized vs Traditional HOB sites	(PIU) MCA emissions testing consultant, HOB technical supervision consultant ¹⁸	Once (Dec 2012)	None	Percentage
Outcome Indicator	Percent Difference Daily Household PM Emissions**	Decrease in average Daily Household PM Emissions in Subsidized vs Traditional Households	Decrease in average Daily Household PM Emissions in Subsidized vs Traditional Households	2010-11 MUST/PIU reports, MCC IE contractor (2012). 2013 entity TBD ¹⁹	June 2012, June 2013	stove type, Ger/house	Percentage
Outcome Indicator	CO Concentration in Participating Homes**	Average Short-term Indoor CO Concentration in Homes with project Subsidized Stoves	Average Short-term Indoor CO Concentration in Homes with project Subsidized Stoves	2010-11 MUST/PIU reports, MCC IE contractor (2012). 2013 entity TBD ²⁰	June 2012, June 2013	None	ppm

¹⁸ Baseline is zero due to zero HOBs improved. Target, from MCA-M consultant 2010-11 for emissions testing, is estimated by per site difference in PM emissions (traditional minus subsidized) from testing data times number of HOB sites (10) planned for funding (a total of 15 separate HOBs). Actuals from HOB technical supervision consultant calculated from total estimated PM difference across improved HOBs across heating season (October 1-April 1) measured once.

¹⁹ This is an estimate of the average PM reductions in a ger household, assuming a weighted average of emissions and household coal consumption for the project subsidized ger household. Baseline and targets calculated from laboratory and field tests from 2010-11 MUST testing in ger households in project-subsidized stoves to estimate emissions, together with data on household activity collected. Actuals calculated from PM emissions sample from in field sample of monitored homes. For 2011-12 heating season, based on pilot assessment by MCC IE contractor of approximately 20 homes (five per subsidy type) during Jan-Feb 2012. For 2012-13 heating season, during multiple periods. Estimates calculated as microgram/kg fuel/day x estimated fuel use. Estimates may be revised retroactively based on improved measures.

²⁰ Baselines and targets based on 2010-11 MUST data for one-hour average ambient indoor concentrations from in field sample of monitored homes measured from hobo reader. Estimate extrapolated from measured sample (calibrated). Actuals based on collection by MCC IE contractor. For 2011-12 heating season, based on pilot assessment by MCC IE contractor of approximately 20 homes (five per subsidy type) during Jan-Feb 2012. For 2012-13 heating season, during multiple periods.



MCA-M M&E Plan

Outcome Indicator	PM Concentration in Participating Homes**	Average Short-term Indoor PM Concentration in Homes with project Subsidized Stoves	Average Short-term Indoor PM Concentration in Homes with project Subsidized Stoves	2010-11 MUST/PIU reports, MCC IE contractor (2012). 2013 entity TBD ²¹	June 2012, June 2013	None	□ g / m3
Outcome Indicator	Percent Difference in Raw Coal Consumption	Decrease in average Raw Coal Consumption, Households Project Subsidized stoves versus with Traditional Stoves and Two layers of Insulation	Decrease in average Raw Coal Consumption, Households Project Subsidized stoves versus with Traditional Stoves and Two layers of Insulation	Baseline: 2010-11 PIU/MUST field testing. Actuals: MCA behavioral survey contractor ²²	June 2012, June 2013	None	Percentage
Outputs:							
Output indicator	Number of HOBs sites upgraded**	# of HOB sites upgraded by quarter	Number of heat-only-boiler sites fully upgraded. Each site will have variable numbers of HOBs.	PIU Progress report	Annually starting Sept. 2012	None	Number
Output indicator	Number of households purchasing subsidized products**	Total number of distinct households purchasing any subsidized product.	Total number of distinct households purchasing any subsidized product. MCCEIF is intended to be market based with subsidies set to encourage replacement of products favoring products more successful during testing. Aggregated by products.	Xac Bank and Khan Bank Monthly Reports	Quarterly	By Products	Number
Output indicator	Number of female-headed households purchasing subsidized	Total number of distinct female-headed households purchasing any subsidized product.	Total number of distinct female-headed households purchasing any subsidized product. MCCEIF is intended to be market based with subsidies set to	Xac Bank and Khan Bank Monthly Reports.	Quarterly	Gender	Number

²¹ Baselines and targets 24-hour average ambient indoor concentrations from 2010-11 MUST/PIU in field sample of monitored homes measured from Dustrak. Estimate extrapolated from measured sample (calibrated). Actuals based on collection by MCC IE contractor. For 2011-12 heating season, based on pilot assessment by MCC IE contractor of approximately 20 homes (five per subsidy type) during Jan-Feb 2012. For 2012-13 heating season, during multiple periods.

²² This is an estimate of the total coal consumption for a traditional vs project subsidized ger household assuming a weighted average coal consumption across all project subsidized stoves. Baseline and targets calculated from PIU/MUST field testing- raw data (estimates) from project subsidized stoves over 24-hr period; raw coal consumption each month of heating season in Table 7 of report. Estimated across heating season (October 1-April 1). Actual consumption data calculated from behavioral survey contractor. Estimated across heating season (October 1-April 1). Disaggregations are measured in tonnes coal (as received, metric). For 2011-12 heating season, based on pilot assessment by MCC IE contractor of approximately 20 homes (five per subsidy type) during Jan-Feb 2012. For 2012-13 heating season, during multiple periods.



MCA-M M&E Plan

	products**		encourage replacement of products favoring products more successful during testing.				
Output indicator	Subsidized stoves sold**	Number of subsidized stoves sold	Number of subsidized stoves sold MCCEIF is intended to be market based with subsidies set to encourage replacement of products favoring products more successful during testing and does not set fixed targets by product.	Xac Bank and Khan Bank Monthly Reports ²³	Quarterly	None	Number
Output indicator	Subsidized stoves in use**	Percent of subsidized stoves in use	Ratio of subsidized stoves in use	Xac Bank and Khan Bank Monthly Reports	Quarterly	None	Number
Output indicator	Energy efficient homes sold**	Number energy efficient homes sold	Number of energy efficient homes sold through the project	PIU Progress report	Quarterly	None	Number
Output indicator	Average subsidy per household **	Average total subsidy paid by MCA (excluding any government subsidy) across all households purchasing any product subsidized by MCEIFF.	Average total subsidy paid by MCA (excluding any government subsidy) across all households purchasing any product subsidized by MCEIFF.	PIU Progress report	Quarterly	None	USD (2007)
Output indicator	Total subsidies spent**	Total subsidy spent across all households purchasing any product subsidized by MCEIFF.	Excludes administrative costs and HOB subsidies, counted elsewhere. ²⁴	MCA-M financial records (MCA CFO)	Quarterly	None	USD (2007)
Output indicator	Power dispatched from substation	Power dispatched from substation to NDC.	The amount of renewable energy offsetting coal-fired power plant generation. ²⁵	CRETG	Quarterly beginning Dec 2012	None	million kwh

Process Milestones

²³ Product sales are not expected to reach levels found in "ERR model 20". SUBSIDY MODEL (FINAL 10-6-11).xls" Stoves worksheet, columns H and J (113,500). In 2011-12, the government is offering a subsidy that has increased sales. This may not be repeated in 2012-13.

²⁴ Exchange rate of 1188.66 from Central Bank of Mongolia www.mongolbank.mn as of Sept 1, 2007.

²⁵ LBNL (MCC M&E) assumes 116 million kWh after losses at a 26% capacity factor.



MCA-M M&E Plan

Process Milestone Indicator	MCEEIF: Establish an independent product testing, certification, and subsidy setting process	Economic and market analysis and subsidy setting methodology for the energy efficient products	PIU Progress report	Once	None	Date
Process Milestone Indicator	MCEEIF: Establish a process for the evaluation and approval of additional products to be subsidized**	Evaluation and approval methodology for the additional energy efficient products to be provided by the project is established	PIU Progress report	Once	None	Date
Process Milestone Indicator	MCEEIF: Feasibility study/replacement plan/bidding documents for Initial replacement of HOBs**	Feasibility study and replacement plan bidding documents for replacement activity of initial 8 HOBs	PIU Progress report	Once	None	Date
Process Milestone Indicator	MCEEIF: Feasibility study/replacement plan/bidding documents for 2nd round of replacement of HOBs	Feasibility study and replacement plan bidding documents for replacement activity of remaining HOBs	PIU Progress report	Once	None	Date
Process Milestone Indicator	MCEEIF: Complete agreements between MCA-Mongolia and banks and/or other implementers, in support of a particular product or home to be subsidized**	Executed agreement(s) between MCA-Mongolia and banks and/or other implementers, in support of a particular product or home to be subsidized	PIU Progress report	Once	None	Date
Process Milestone Indicator	MCEEIF: Complete a form of consumer participation agreement	For each product to be subsidized by MCEEIF, have developed an appropriate consumer participation agreement	PIU Progress report	Once	None	Date
Process Milestone Indicator	MCEEIF: Public awareness campaign started	For each product to be subsidized by MCEEIF, have developed and delivered at least a three-month public awareness campaign addressing benefits of energy efficiency, the availability and amount of subsidies, and the identity of the participating partners	PIU Progress report	Once	None	Date
Process Milestone Indicator	MCEEIF: Establish a framework environmental and social assessment and EMP**	Development of a framework environmental and social assessment and EMP including a gender integration plan, all acceptable to MCC, that lays out guidance and procedures for environmental reviews	PIU Progress report	Once	None	Date
Process Milestone Indicator	Wind: Power Purchase Agreement between CRETN and NewCom LLC**	Restated and Amended Power Purchase Agreement between CRETN and NewCom LLC. Available power from the wind farm will be purchased on a take or	PIU Progress report	Once	None	Date



MCA-M M&E Plan

		pay or equivalent basis, as outlined in the power purchase agreement for the wind farm;				
Process Milestone Indicator	Wind: GoM establishes tariff increase plan	GoM establishes a plan for increasing electricity tariffs that will eliminate the need for subsidies by 2015, including an initial increase to take place at the time the power purchase agreement for the wind farm begins and a second increase the following year;	PIU Progress report	Once	None	Date
Process Milestone Indicator	Wind: Substation upgrade procured	Contract awarded for substation upgrade.	PIU Progress report	Once	None	Date
Process Milestone Indicator	Wind: Wind farm and upgrades completed	Mechanical completion of the wind farm, fiber optic cable, substation and dispatching system upgrades fulfilling condition precedent	PIU Progress report	Once	None	Date
Process Milestone Indicator	Wind: Operation and maintenance plan(s) for Network Upgrade established	A plan for the maintenance and funding of the Network Upgrades is developed and adopted, meeting the condition precedent.	PIU Progress report	Once	None	Date
Process Milestone Indicator	Wind: Environmental Management System, environmental assessment, and EMP**	Prior to Disbursements associated with any construction for the Network Upgrades, the Government shall develop an Environmental Management System, environmental assessment, and EMP, all acceptable to MCC.	PIU Progress report	Once	None	Date

*-Common Indicator

**.-New indicator added by 2011 M&E Plan Revision



MCA-M M&E Plan

ESA Team

Indicator Type	Indicator	Definition	Data Source/ Responsible Entity	Frequency	Units
Process Milestones					
Process Milestone Indicators	ESOC Contract Start	Start of ESOC operation	MCA-M, ESA Officer	Once	Date
Process Milestone Indicators	Final Rail EIA / EMP	EIA conducted and report received in Rail Project	Rail Project EIA Contractor	Once	Date
Process Milestone Indicators	FEA / FEMP for Urban & Hashaa Component	EA/EMP conducted and report received in Urban & Hashaa Plot Component	ESOC	Once	Date
Process Milestone Indicators	FEA/FEMP for Peri-Urban Component	EA/EMP conducted and report received in Peri-Urban Component	ESOC	Once	Date

M&E Team

Indicator Type	Indicator	Definition	Data Source/ Responsible Entity	Frequency	Units
Process Milestones					
Process Milestone Indicators	Peri-Urban Evaluation Design Finalized for Erdenet, UB and Darkhan	Finalized version of Peri-Urban Project Evaluation Design developed and by IPA	MCA M&E Officer	Once	Date
Process Milestone Indicators	Health Evaluation Design Finalized	Evaluation design for the Health project developed and submitted to MCA and MCC	MCA M&E Officer	Once	Date
Process Milestone Indicators	Peri-Urban Evaluation Design Finalized for Choibalsan and Kharkhorin	Evaluation design for the extended area of Peri-Urban property rights project developed and submitted to MCA and MCC	MCA M&E Officer	Once	Date
Process Milestone Indicators	TVET Evaluation Design Finalized	Final design of TVET project evaluation submitted to MCA and MCC	MCA M&E Officer	Once	Date
Process Milestone Indicators	Special Hashaa Plot Survey contract awarded	Contract signed for Urban property rights project evaluation data collection	MCA M&E Officer	Once	Date
Process Milestone Indicators	Peri-Urban Survey contract awarded	Contract signed for Peri-Urban property rights project evaluation data collection	MCA M&E Officer	Once	Date



B. Performance Tracking Tables

Property Rights Project

Indicator	Units	Classification Type	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of Compact Target
Outcome 1: Increased capitalization of land assets									
Immovable property value of hashaa plots in UB	USD (2007) per square meter	Level	7.28	7.28	7.28	7.4	7.71	8.23	8.23
Immovable property value of hashaa plots outside UB	USD (2007) per square meter	Level	2.44	2.44	2.44	2.5	2.56	2.62	2.62
Households accessing bank credit (#)	Number	Level	6,400					16166	16166
Outcome 2: Increased efficiency and reliability of land registration									
Time for property transactions (first-time)*	Percentage	Level				TBD ²⁸		TBD	TBD
Informal time for property transactions (sales)*	Percentage	Level				20 ²⁹		TBD ³⁰	TBD
Cost for property transactions (first-time)*	Percentage	Level				TBD		TBD	TBD
Informal cost for property transactions (sales)*	Percentage	Level				190,815 ³¹		TBD ³²	TBD
Number of property transactions**	Number	Level					TBD ³³	TBD	TBD
Number of mortgage transactions**	Number	Level					TBD ³⁴	TBD	TBD
Number of Legal and Regulatory Reforms Adopted*	Number	Cumulative	0	0	2	4	6	6	6
Outputs: Increased land right formalization									
Household land rights formalized*	Number	Cumulative	0				38,172	52,995	52,995

²⁸ Related information for this and the subsequent three indicators for year three will be collected by MCA but was unavailable from official sources by the time of M&E plan revision.

²⁹ Average days for Property transfer. Preliminary estimation from 2011 Property Registry Process Study.

³⁰ No data is available until Property Registry Process Study-Wave 2 is completed

³¹ Average cost for Property transfer. Preliminary estimation from 2011 Property Registry Process Study.

³² No data is available until Property Registry Process Study-Wave 2 is completed

³³ This is new indicator and data will be collected by quarterly starting from 1st quarter of Year4

³⁴ This is new indicator and data will be collected by quarterly starting from 1st quarter of Year4



MCA-M M&E Plan

Stakeholders Trained*	Number	Cumulative	0	9	265	365	465	465	465
Conflicts successfully mediated*	Number	Cumulative							
Parcels corrected or incorporated in land system*	Parcels	Cumulative					21,000	53,000	53,000
Number of Households Reached through reconnaissance work	Number	Cumulative	0				71,500	91,981	91,981
Land administration offices established or upgraded*	Number	Cumulative	11			2	6	11	11
Urban parcels mapped	Number	Cumulative					42,000	53,000	53,000
Process Milestones:									
Legislative and regulatory commission report submitted	Date	Date	August 31, 2009						
Building provided for registry office	Date	Date	June 30, 2009						
Design for registry office completed	Date	Date	October 31, 2010						
Awareness and outreach campaign designed	Date	Date	January 31, 2010						
Satellite imagery procured	Date	Date	June 30, 2010						
Continually Operating Reference Stations (CORS) operational	Date	Date	December 31, 2010						
Registry processes updated and operational	Date	Date	June 30, 2012						

*-Common Indicator

**.-New indicator added by 2011 M&E Plan Revision



MCA-M M&E Plan

Peri-Urban Land Leasing Activity

Indicator	Units	Classification Type	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of Compact Target
Outcome 1: Increased herder household income									
Net earned income of herder households in Darkhan, Erdenet and UB	USD	Level	4,791			4791		5642	5642
Net earned income of herder households in Choibalsan and Kharkhorin	USD	Level	TBD				TBD ³⁵	TBD	TBD
Net earned income of control households in Choibalsan and Kharkhorin	USD	Level	TBD				TBD ³⁶	TBD	TBD
Outcome 2: Increased peri-urban herder productivity									
Herd mortality rate difference of project treatment to control and comparison groups, intensive farms (cattle)	%	Level	0	0	0	0	10	20	20
Herd mortality rate difference of project treatment to control and comparison groups, semi-intensive farms (cattle)	%	Cumulative	0	0	0	0	10	20	20
Herd mortality rate difference of project treatment to control and comparison groups, semi-intensive farms (sheep)	Percent	Cumulative	0	0	0	0	10	20	20
Liters of milk per cow (intensive)	Liter	Level	907			907		1226	1226
Liters of milk per cow (semi-intensive)	Liter	Level	745			745		833	833
Outcome 3: Optimize peri-urban rangeland carry capacity and range management									
Number of herder groups limiting their livestock population to the carrying capacity of their leases on intensive farms in 3 central aimags	Number	Level	0	0	0	33	39	44	44
Number of herder groups adopting hay making requirement /capacity for intensive farms	Number	Cumulative	0	0	0	4	24	45	45
Number of herder groups limiting their livestock population to the carrying capacity of their leases on	Number	Cumulative	0	0	0	234	275	315	315

³⁵ No data is available until Expansion-PURLS is completed in Choibalsan and Kharkhorin.

³⁶ No data is available until Expansion-PURLS is completed in Choibalsan and Kharkhorin.



MCA-M M&E Plan

semi-intensive farms									
Number of herder groups adopting hay making requirement /capacity for semi-intensive farm	Number	Cumulative	0	0	0	147	231	315	315
Management effect, summer standing biomass	Kg/Ha	Level	0			0	1500	1500	1500
Management effect, winter standing biomass	Kg/Ha	Level	0			0	600	600	600
Weight gain (cattle)	TBD	TBD	TBD			TBD	TBD	TBD	TBD
Weight gain (sheep)	TBD	TBD	TBD				TBD	TBD	TBD
Outputs:									
Leases awarded	Number	Cumulative	0	0	0	234	465	465	465
Leases awarded (female)	Number	Cumulative	0	0	0	19	42		
Household land rights formalized	Number	Cumulative	0	0	0	1324	1324	1324	1324
Wells completed	Number	Cumulative	0	0	0	82	164	399	399
Stakeholders Trained*	Number	Cumulative	0	200	400	700	1015	1015	1015
Stakeholders Trained (female)* ³⁷	Number	Cumulative	0	0	0	0	244	244	244
Number of legal and regulatory reforms adopted*	Number	Cumulative	0	0	0	1	1	1	1
Conflicts successfully mediated	Number	Cumulative	0	0	NA	NA	NA	NA	NA
Repayment rate by the leaseholders	Percent	Level	0			0	80%	85%	85%
Repayment rate by the leaseholders (Female) ³⁸	Number	Cumulative	0			0	80%	85%	85%
Process Milestones:									
Legislative and regulatory commission report submitted	Date	Date	April 1, 2009						
Applications to lease land submitted by herder groups (UB, Darkhan and Erdenet)	Date	Date	December 31, 2009						
Applications to lease land submitted by herder groups (Choibalsan and Kharkhorin)	Date	Date	December 31, 2010						
Selection of herder groups to receive land leases, and lease signing (Ulaanbaatar, Darkhan and Erdenet)	Date	Date	December 30, 2010						
Selection of herder groups to receive land leases, and lease signing (Choibalsan and Kharkhorin)	Date	Date	October 21, 2011						

³⁷ As gender sensitive attendance recording was implemented since October 2011, the Year 3 data is unavailable, and Year 4 and 5 are subject to revision.

³⁸ Herder groups have not started paying yet



MCA-M M&E Plan

Final GIS database and maps prepared (Ulaanbaatar, Darkhan, and Erdenet)	Date	Date	September 21, 2009
Final GIS database and maps prepared (Choibalsan and Kharkhorin)	Date	Date	December 30, 2010
Training carried out	Date	Date	September 1, 2013
Materials for fencing and animal shelters provided (Ulaanbaatar, Darkhan and Erdenet)	Date	Date	March 31, 2011
Materials for fencing and animal shelters provided (Choibalsan and Kharkhorin)	Date	Date	December 31, 2011
Wells constructed in Ulaanbaatar, Darkhan, Erdenet, Choibalsan and Kharkhorin	Date	Date	December 31, 2011

*-Common Indicator

**.-New indicator added by 2011 M&E Plan Revision



MCA-M M&E Plan

Vocational Education Project

Indicator	Units	Classification Type	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of Compact Target
Outcome 1: Increased income									
Annual salary (USD) ³⁹	USD 2007	Level	1237	1237	1237	1237	1262	1336	1336
Outcome 2: Increased employment									
Rate of employment (%) ⁴⁰	Percent	Level	71%	71%	71%	71%	72%	75%	75%
Outcome 3: Improved quality and relevancy of TVET system									
Non-governmental funding for vocational education	Percent	Level	1%	2%	5%	7%	11%	16%	16%
Graduates from MCC-supported educational facilities*	Number	Cumulative				12,000	12,800	15,800	15,800
Students participating in MCC-supported education activities*	Number	Cumulative				33,000	41,000	50,000	50,000
Certified vocational education teachers	Percent	Level	0%	0%	0%	25%	60%	80%	80%
Employed graduates of MCC-supported educational activities*	Number	Cumulative					TBD ⁴¹	TBD	TBD
Outputs:									
Instructors trained*	Number	Cumulative				500	1000	1500	1500
Educational facilities constructed or rehabilitated*	Number	Cumulative				10	18	18	18
Percent of active teachers receiving certification training	Percent	Level	0%	0%	0%	20%	70%	100%	100%
Legal, financial and/or policy reforms adopted*	Number	Cumulative	0			2	2	4	5
Number of practical training sites fully upgraded	Number	Cumulative				6	70	75	75
Number of PPP agreements established	Number	Cumulative			0	27	39	39	39
Change in proportion of families by income	Percentage	Level			14.7/30.5 /38.2				16/32/40

³⁹ targets are percent increase over Year 3 level

⁴⁰ targets are percent increase over Year 3 level

⁴¹ No data is available until the Graduate Follow-Up Survey Wave 1 is completed.



MCA-M M&E Plan

statements: High Income/Mid Income/Low Income**									
Increased public awareness of TVET**	Percentage	Level			75%				77%
Knowledge of local TVET providers**	Percentage	Level			78%				80%
TVET quality assessment**	Percentage	Level			51%				53%
Expression of interest in TVET**	Percentage	Level			40.3%				42%
Process Indicator:									
Value of educational facility construction, rehabilitation, and/or equipping contracts signed*	Thousands of USD (2007)	Cumulative			800	5,800	16,000	19,000	19,000
Value of construction, rehabilitation, and/or equipping contracts disbursed*	Thousands of USD (2007)	Cumulative			640	4,600	12,800	15,200	15,200
MOU signed with MECS and MSWL	Date		December 1, 2008						
NCVET established	Date		March 31, 2009						
TVET legislation passed	Date		February 1, 2009						
Labor Market Assessment completed	Date		March 1, 2010						
TORs finalized for creating new curricula and for establishing a media support center	Date		May 31, 2010						
Inspection and Assessment of equipment and infrastructure improvement needs completed	Date		July 1, 2010						
Public Outreach plan developed	Date		April 30, 2010						

*-Common Indicator

** -New indicator added by 2011 M&E Plan Revision



MCA-M M&E Plan

Health Project

Indicator	Units	Classification Type	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of Compact Target
Outcome 1: Reduced risk of premature death and disability from NCDs									
Prevalence of reduced sodium intake	Percent	Level	TBD					TBD	TBD
Prevalence of high blood sugar	Percent	Level	10.4					10.0	10.0
Prevalence of hypertension	Percent	Level	35.5					35.0	35.0
Exposure to second hand smoke	Percent	Level	35.6					32.6	32.6
Screening for diabetes	Percent	Level	NA					66	66
Screening for hypertension	Percent	Level	NA					66	66
Prevention of cervical cancer through HPV vaccination	Percent	Level	0				10	10	10
Productive years of workforce	Year	Level	57.36				TBD	TBD	TBD
Accident reduction	Number	Level	759.2					607.4	607.4
High risk for NCDs	Percent	Level	26.4					25	25
Outcome 2: Improved National and Local Response to NCDI									
State budget allocated to NCDs	Thousands USD	Level	TBD					1000	1000
Local government spending towards NCDs	USD	Cumulative	TBD			TBD		TBD	TBD
Outcome 3: Increased understanding of NCDI Prevention									
Smoke free places	Number	Cumulative	TBD				TBD	TBD	TBD
Awareness of working population related to NCD prevention	Percent	Level	25.3						32
Outcome 4: Increased availability of sound NCDI services									
Early detection of cervical cancer	Percent	Level	38.4					46.4	46.4
Sound NCD service	Percent	Level	10.3					70	70
Screening for cervical cancer	Percent	Level	18.9					26.9	26.9
Outputs:									
Capacity of health staff	Number	Cumulative	179					5000	5000
Capacity of school teachers**	Number	Cumulative	0					565	565
Capacity built in stroke and AMI	Number	Cumulative	0					20	20



MCA-M M&E Plan

Emergency response for stroke and AMI (units)	Number	Cumulative	0					5	5
Civil society mobilization	Thousands USD	Cumulative	0					3000	3000
Mobilization of workplaces cooperation on NCDI prevention	Number	Cumulative	0					70	70
Improved preparation for traffic accidents	Number	Cumulative	0					400	400
Hospitals that treat cervical cancer	Percent	Level	12.9					100	100
Provision of health education materials	Number	Cumulative	0					1000000	1000000
Availability of health education materials	Percent	Level	9.5					95.0	95.0
Process Milestones									
First wave of Facility-based Impact Study (FBIS) data collections conducted	Date							Aug 2010	
Recommendations on road safety interventions available	Date							April 2010	
National NCDI communication strategy revised and updated	Date							May 2010	
Curriculum for in-service and pre-service training completed	Date							Nov 2010	
Training of trainers for NCDI project activities completed	Date							April 2011	
Grants awarded	Date							June 2010, June 2011, June 2012	
RNA completed	Date							March 2010	
Training contract awarded	Date							Oct 2010	
IEC/BCC contract awarded	Date							Oct 2010	
NCD screening started	Date							July 2011	
Study Tour Activity Completed	Date							May 2013	
IC Contract awarded	Date							Jan 2009	
Recommendation on National strategy for salt reduction completed	Date							June 2011	

*-Common Indicator

**.-New indicator added by 2011 M&E Plan Revision



MCA-M M&E Plan

Choir-Sainshand Road Project

Indicator	Units	Classification Type	Baseline	Year 2	Year 3	Year 4	Year 5	End of Compact Target
Outcome 1: More efficient transport for trade and access to services								
Vehicle operating cost saving*	Millions of USD (2007)	Level	0	0	0	0	3.5	3.5
Average annual daily traffic*	Number of Vehicles	Cumulative	625	625	625	625	1,782	1,782
Roughness *	IRI unit	Level	11.2	--	--	--	2.0	2.0
Travel Time	Hour	Level	10 hours, 32 min	10 hours, 32 min	10 hours, 32 min	10 hours, 32 min	5 hours, 10 min	5 hours, 10 min
Process/Outputs:								
Kilometers of roads under design*	Km	Cumulative	0	17	20	20	20	20
Value of signed road feasibility and design contracts*	Millions of USD (2007)	Cumulative	0	6.0	6.0	6.0	6.0	6.0
Value disbursed of road feasibility and design contracts*	Millions of USD (2007)	Cumulative	0	0	2.4	3.21	6.0	6.0
Value of signed road construction contracts*	Millions of USD (2007)	Cumulative	0	45	70.1	70.1	70.1	70.1
Value disbursed of road construction contracts* ⁴²	Millions of USD (2007)	Cumulative	0	0	TBD	TBD	TBD	TBD
Kilometers of roads under works contracts*	Km	Cumulative	0	176.4	176.4	176.4	176.4	176.4
Number of workforce trained on trafficking in persons, health and safety, and HIV/AIDS and STIs	Number	Cumulative	46	0	46	92	138	138
Kilometers of roads completed*	Km	Cumulative	0	0	0	0	176.4	176.4
Process Milestones								
Construction contract for Choir-Sainshand signed	Date	Date	1 June 2010					
Supervision contract signed	Date	Date	1 June 2010					
ESIA approved for UB-Nalaikh Road Segment	Date	Date	11 March 2011					
Design Build Contract Signed for UB-Nalaikh segment	Date	Date	TBD ⁴³					

* Common Indicator

**_New indicator added by 2011 M&E Plan Revision

⁴² Whether or not to announce the RFP for UB-Nalaikh is not decided so far, as a result of previous procurement failures.

⁴³ Same as footnote 1.



MCA-M M&E Plan

Energy and Environmental Project

Indicator	Units	Classification type	Baseline (year2)	Targets (Year 3)	Targets (Year 4)	Targets (Year 5)
Outcomes						
Percent Difference in PM Emissions, Homes	%	Level	0%	0%	38%	57%
Absolute Difference in PM Emissions, Homes	Tonne (Metric)	Level	0	0	1,712	2,635
Percent Difference in median fuel costs	%	Level	0%	0%	10%	15%
Percent Difference in PM Emissions from HOB sites**	%	Level	0%	0%	67%	67%
Percent Difference Daily Household PM Emissions**	%	Level	0%	0%	86%	15%
CO Concentration in Participating Homes**	ppm	Level	TBD	Same as baseline	Same as baseline	Same as baseline
PM Concentration in Participating Homes**	□ g / m3	Level	TBD	Same as baseline	Same as baseline	Same as baseline
Percent Difference in Raw Coal Consumption	%	Level	0%	0%	10%	15%
Outputs:						
Number of HOBs sites upgraded**	Number	Cumulative	0	0	4	10
Number of households purchasing subsidized products**	Number	Cumulative	0	2660	NA	NA
Number of female-headed households purchasing subsidized products**	Number	Cumulative	0	NA	NA	NA
Subsidized stoves sold**	Number	Cumulative	0	0	NA	NA
Subsidized stoves in use**	Number	Level	0	0	90.0%	90.0%
Energy efficient homes sold**	Number	Cumulative	0	0	NA	NA
Average subsidy per household **	USD (2007)	Level	0	\$ 476.8	NA	NA
Total subsidies spent**	USD (2007)	Cumulative	0	\$ 1,268,252	NA	NA
Power dispatched from substation	million kwh	Cumulative	0	0	0	116
Process Milestones:						
MCEEIF: Establish an independent product testing, certification, and subsidy setting process;	Date	Date	10-Sep-10			



MCA-M M&E Plan

MCEEIF: Establish a process for the evaluation and approval of additional products to be subsidized;**	Date	Date	10-Sep-10
MCEEIF: Feasibility study/replacement plan/bidding documents for Initial replacement of HOBs**	Date	Date	21-Oct-11
MCEEIF: Feasibility study/replacement plan/bidding documents for 2nd round of replacement of HOBs	Date	Date	16-Dec-11
MCEEIF: Complete agreements between MCA-Mongolia and banks and/or other implementers, in support of a particular product or home to be subsidized;**	Date	Date	10-Sep-10
MCEEIF: Complete a form of consumer participation agreement, **	Date	Date	10-Sep-10
MCEEIF: Public awareness campaign started	Date	Date	10-Jun-11
MCEEIF: Establish a framework environmental and social assessment and EMP**	Date	Date	10-Sep-10
Wind: Power Purchase Agreement between CRETN and NewCom LLC**	Date	Date	1-Apr-12
Wind: GoM establishes tariff increase plan	Date	Date	1-Oct-12
Wind: Substation upgrade procured	Date	Date	24-Mar-12
Wind: Wind farm and upgrades completed	Date	Date	31-Dec-12
Wind: Operation and maintenance plan(s) for Network Upgrade established	Date	Date	1-Dec-12
Wind: Environmental Management System, environmental assessment, and EMP**	Date	Date	10-Sep-11

*-Common Indicator

** -New indicator added by 2011 M&E Plan Revision



MCA-M M&E Plan

ESA Team

Indicator	Units	Classification Type	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5
Process Milestones								
ESOC Contract Start	Date	Date	October 31, 2008					
EA/EMP for Urban & Hashaa Project	Date	Date	November 30, 2010					
EA/EMP for Peri-Urban Project	Date	Date	March 31, 2010					
EA/EMP for TVET Project	Date	Date	December 31, 2009					
EA/EMP for Health Project	Date	Date	December 31, 2009					

M&E Team

Indicator	Units	Classification Type	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5
Process Milestones								
Peri-Urban Evaluation Design Finalized for Erdenet, UB and Darkhan	Date	Date	March 31, 2010					
Health Evaluation Design Finalized	Date	Date	April 30 2010					
Peri-Urban Evaluation Design Finalized for Choir and Sainshand	Date	Date	September 30, 2010					
TVET Evaluation Design Finalized	Date	Date	May 30, 2010					
Special Hashaa Plot Survey contract awarded	Date	Date	August 30, 2010					
Peri-Urban Survey contract awarded	Date	Date	June 30, 2010					



C. Detailed Impact Evaluation Plan

The rationale for impact evaluation is to establish clear attribution for effect of the program activities compared to a counterfactual. Approaches envisioned for the impact evaluation of each Project or activities are described below. Each of these evaluation designs is preliminary and will be revised after the impact evaluation design reports developed by the contractors have been approved by MCC and MCA-M.

Project 1 – Property Rights Project, Property Registration

Key Question

How does the privatization and registration of ger area land through the Property Rights Project impact land investments, property values, access to credit, and ultimately, household income?

Key outcomes to be evaluated include a) ownership and registration status of household plots, b) cost and time to register, c) household income, d) land values, e) household access to credit and terms under which they receive credit, f) probability that land is bought and sold by facilitating land transactions, and g) number of households undertaking improvements to their land.

Methodology

The Property Rights Project was deemed a good candidate for a rigorous impact evaluation using randomized assignment. The current evaluation design groups hashaa plots into geographic clusters defined by kheseeg. The kheseeg was deemed the appropriate unit of randomization because there are cost savings associated with registering large groups of plots at the same time. Kheseegs are the smallest administrative unit utilized in Mongolian cities. Because these are small and relatively numerous, randomizing at this level will allow for the greatest statistical power while also allowing for the cost savings associated with registering geographically contiguous groups of plots at the same time. Some kheseeg areas will be randomly selected to receive the privatization and registration assistance (the treatment group), while other kheseeg areas will not receive the privatization and registration assistance (the control group). The outcomes of the households in the treatment and control group will be compared to assess the impacts of the program. Random assignment will lead to the creation of two virtually identical groups at the baseline. The only difference between the two groups will be that the treatment group is offered the privatization and registration assistance, while the other group (the control group) is not. As a result, any changes observed between the two groups over time can be attributed to the privatization and registration assistance program.

M&E is also interested in implementing a stratified randomization. This involves stratifying kheseeg areas by the share of hashaa plots that are already fully registered or the share that are already fully privatized. Within each strata, a certain number of kheseeg areas will be randomly assigned to be in the treatment group. The stratified randomization insures that the treatment and control groups are balanced along important dimensions, and avoids the scenario in which simple randomization happens to divide the sample into treatment and control groups that are very different in their progress towards registration.



MCA-M M&E Plan

The current project implementation plan involves extending project assistance to 3 districts within the capital city as well as 8 regional centers throughout Mongolia. The evaluation will involve all 3 districts (Bayanzurkh, Songinokhairkhan, and Chingeltei) in the capital city as well as the 2 largest regional centers, Darkhan and Erdenet. Half of the kheseqs within the capital city districts and approximately 65% of the kheseqs in the 2 regional centers will be assigned will be assigned to treatment status and receive project benefits. The latest figures suggest that there are approximately 70,000 plots eligible for project assistance in the targeted districts of the capital and an additional 12,000 in the 2 regional centers. This suggests that the project will provide benefits to approximately 43,500 plots in the evaluation areas. The remaining 39,900 plots will serve as a control group.

In addition to registration assistance, the Property Rights Project also entails changes to the laws and regulations governing registration of land ownership, office upgrades, and improvements to the registration system. Because these changes are expected to affect both treatment and control groups, the evaluation design specified above would not capture these impacts. Assuming the baseline is established before the institutional reforms are carried out, a pre-post comparison will be carried out in order to measure the impact of these aggregate changes, and in particular to examine the cost and time to register and the number of plots registered. In addition, a separate small pre-post observational study will be conducted with a sample of the individuals who come in to register their immovable property in order to assess the cost and time improvements associated with upgrades and legal reforms noted above.

The key sources of data will come from the Special Hashaa Plots Survey (SHPS). The first round of the SHPS (the baseline) will occur before the registration contractor begins work in treatment areas. The household-level surveys will include questions on demographic characteristics of household members (age, education, race, religion), employment and income, land tenure and transactions, total wealth and its components, borrowing behavior including sources of credit, size of loans terms of credit, the use of collateral, and the cost and time to register. The key plot-level variables include ownership status, property value, specific measures of investments to land, specific measures of investment in housing, plots size, and distance to amenities.

If possible, it will also be useful to supplement this data with aggregate institutional data. M&E is currently working on securing cooperation from banks to gather aggregate statistics on lending activity in ger areas. Data on land registration and transactions from the State Registry, as well as data on property values of hashaa plots from newspaper listings and real estate companies may be examined as well.

Project 2 – Property Rights Project, Peri-Urban Rangeland Management

Key Question

How does the securing of long-term land use rights and provision of infrastructure and training through the Peri-Urban Rangeland Management Project impact livestock herding efficiency and productivity in the peri-urban area?

Key outcomes to be evaluated include a) herder household income, b) herd mortality rate, c) herd



productivity, as measured, for example, by liters of milk per dairy cow, d) livestock and rangeland management practices, such as use of rangeland within its carrying capacity, e) investments in rangeland, capital, and technology for future business activity, and f) land quality as measured, for example, by grass yield and vegetation composition.

Methodology

The ideal approach to evaluating the impact of this project on the outcomes of interest would involve randomly allocating project assistance in some way. Unfortunately, in the project areas surrounding Ulaanbatar, Darkhan and Erdenet, logistical and legal constraints did not allow for the adoption of a randomized evaluation strategy. Therefore, two separate approaches are being utilized to evaluate the project. A less rigorous, non-randomized propensity score matching (PSM) approach will be used in the Ulaanbaatar, Darkhan and Erdenet areas while the ideal randomized lottery approach will be utilized in the areas surrounding the cities of Choibolson and Kharkhorum. These two approaches will be described separately below.

Ulaanbaatar, Darkhan and Erdenet – Non-Randomized PSM Approach

Since beneficiary herders in these areas were chosen through a non-randomized idiosyncratic process, one cannot assume that they are similar to other herders that applied for the project but were not chosen. In order to construct a control group that is similar to the herders in the project, statistical modeling techniques will need to be used. A large number of non-beneficiary herder households will be interviewed during the baseline and follow-up data collections. These households will include herders that applied for the project but were not accepted as well as a randomly selected portion of the general herder population. After sufficient data collection, these non-project households will be compared to the project households along a variety of observable dimensions like income, education, rangeland location, herd size, etc. Each project household will then be paired or matched with one or more non-project household that is very similar in terms of important observable characteristics. The difference in outcomes for these paired households will then be analyzed and the average difference will be calculated to gain an estimate of project impact. Because each pair of households will be almost identical in terms of observable characteristics, except for the fact that one was selected to participate in the project and the other was not, it is reasonable to assume that any difference in outcomes between the pair was induced by the project.⁴⁴

The major drawback of this approach is that the estimate of impact generated does not account for non-observable traits, such as motivation or talent, that can have an important effect on ultimate outcomes.

Choibalsan and Kharkhorin – Two-stage Randomized Design

In the first stage of this design, all herder groups who had access to land that met the project criteria were allowed to submit applications for the available leasing slots. These applications were scored by local selection committees, according to a set of predefined social criteria, and some of the herders were short-listed. In the second round of selection, all of the short-listed applicants participated in a lottery. Approximately half of the applicants were randomly selected to receive a leasing slot (the treatment group) while the other candidates were assigned to the

⁴⁴ This assumes no overlap of land or pasture usage between treatment and control herders. If this assumption does not hold and “control” herders lose access to land they previously used because it has now been leased to the treatment group, the benefits of the treatment could be exaggerated.



control group. Because random assignment leads to the creation of two virtually identical groups at the baseline, the only difference will be that the treatment group is offered the lease and associated project assistance while the other group (the control group) is not. As a result, any changes observed between the two groups over time can be attributed to the leasing program.

Data Collection

Although the analysis will differ, both approaches will utilize the same basic data sources. Three sets of surveys will be conducted. First, a survey known as the “Peri-Urban Rangeland Leasing Survey” (PURLS) will collect data from: 1) lease candidates – both control and treatment; 2) neighboring households located on land directly contiguous to plots occupied by lease candidates; and 3) soum governors. The first component is designed to measure the direct impact of the project on herder group households. The second component will measure potential spillovers on neighboring households, and the third component will track soum level outcomes. The lease candidate and neighbor questionnaires will collect data on the characteristics and economic activity of herder households, herd and rangeland management practices, characteristics of the pastureland plot, conflict and cooperation with neighbors, tenure rights and perceptions, and future plans for business activity. The soum governor questionnaire will collect data on soum-level land disputes, in- and out-migration, land tenure rights, and overall agricultural activity.

The second survey will consist of land quality measures collected from lease sites. The land quality survey will provide baseline and follow-up information on the quality of the leased tracts of the land. This will allow the research team to track changes in quality over time and control for heterogeneity in other treatment effects that may be affected by characteristics in the land tracts.

The third and final survey will involve tracking changes in animal health. Given that animal health is a key input in generating animal products, and thus herder income, this will be a key intermediate indicator of project impact.

Project 3 –TVET Project

Key Question

How do the activities of the TVET project, and, in particular, the competency-based training and complementary equipment upgrades in vocational education schools impact the overall quality of TVET schools as well as the skill-level, productivity, employment, and income of TVET graduates?

The key outcomes to be evaluated include a) graduates’ employment status and regularity of employment, b) graduates’ job type and industry, c) graduates’ wage rates and household income, and d) graduates’ technical skill level and general knowledge. In addition to student-level impact evaluation, school-level outcomes will be evaluated including a) application, enrollment, and graduation rates, b) teacher to student ratios, c) equipment availability, and d) provision of employment and career guidance services.

To detect the project’s likely impacts on employment rates and wages among beneficiaries, it is



indicated by the initial power calculations that a simple randomized controlled trial would require sample size of approximately 4,000 individuals. However, the evaluation will not be a simple randomized controlled trial given that the intervention is being assigned on clusters – both schools and trades. Once this complicated design has been taken into account, the necessary sample size will be much higher. The required sample size will most likely not be determined until after the baseline data has been collected in September of 2010 and adjustments may need to be made even after this, depending on the final number of annual student cohorts to be included in the sample cannot be determined until the sample size has been determined. Ideally one baseline cohort for all treatment and control schools before policy intervention begins should be obtained. The remaining number of cohorts will simply be a function of the required sample size and the average size of the cohorts in the selected schools. For example, if power calculations determine that a sample of 10,000 students is required to detect project impacts and each annual cohort of students in selected schools contains approximately 5,000 students for each cohort, then 2 cohorts in addition to the baseline will be required - a total of 3 cohorts or 15,000 students in all.

Methodology

The evaluation will estimate the impact of Vocational Education Project's activities by comparing students and schools that have received the benefits of the project to similar groups that do not receive these benefits. In the case of student-level outcomes, a rigorous and well-tested method for measuring impact is the so called "oversubscription" design which is described below. Due to non-feasibility of constructing reasonably similar groups of schools to compare given to the small number of schools which will be receiving the equipment upgrades, school-level comparisons will not be estimated, but the school level outcomes will be measured.

The student-level comparison requires random assignment of school admissions. This component takes advantage of the fact that there are a number of TVET schools that receive far more applications than they can accommodate. This oversubscription allows us to create comparable sets of students who attend the school and who do not by randomly assigning applicants to receive positions in the schools. Working closely with the recruited schools, we will first eliminate students not qualified for the TVET programs. The remaining qualified students will then enter a lottery in which students are randomly selected to fill the available positions in the school. The slots to admit students are set by the Agency for Vocational Education and Training (AVET) every year. The students applied to the vocational schools are randomly admitted until all slots set by the AVET are filled. Those who are selected for admission will form the "treatment" group of students. Those who are not selected will form the "control" group. All applicants who were assigned into treatment and control groups at the selected schools during the years that randomized admissions are being administered will form the sample of the impact evaluation study.

Because individuals are randomly assigned to either the treatment or control group, the two groups will be similar in every respect except for the fact that the treatment group received TVET training. Outcomes for the 2 (two) groups can thus be compared over time and any difference that arises between them over time can be credibly attributed to the project.

Three separate data collection tools would be used for this evaluation – one for school level



outcomes and two more for individual level outcomes.

School Outcomes – A series of baseline and follow up surveys would be administered to all schools that are participating in the impact evaluation study which includes schools that are selected to receive the benefits of the program as well as that are not selected. These surveys would be annual and will gather information on school characteristics. Three separate questionnaires will be administered as part of the data collection process. One will be administered to school directors and staff in order to record important school level characteristics including price of tuition, application, enrollment, and graduation rates, teacher to student ratios, teacher ability, equipment availability, provision of employment and career guidance services, etc. Given the small number of schools involved in the project, it is unlikely that we will be able to obtain estimates of the impact the project these on these variables. Rather, this information will simply be used to control for heterogeneity which will make the overall project impact estimate more accurate.

Student Outcomes – We will also collect individual level student data on applicants to the TVET schools for several years. We plan to work with the respective TVET schools to utilize information from the applications themselves and to collect additional information from the students themselves. For each cohort of applicants, we will collect several rounds of follow-up data in order to gauge both the intermediate outcomes such as whether students graduate and long-term outcomes including employment and earnings. There will be two separate data collection: one at the baseline which will be collected through modified admissions process and another after the graduation. In order for this evaluation strategy to work, students, rejected applicants and graduates from both treatment and control schools must be tracked and re-interviewed several times over multiple years. This will be a challenging task as many individuals will undoubtedly relocate during the period of data collection. If some individuals cannot be located when the time to re-interview comes around, then this will introduce attrition bias, which will skew and distort our estimates of project impact. Therefore, the tracking questionnaire to all individuals of treatment and control is needed to be repeated annually while the follow-up survey re-interviewing individuals take place after the graduation.

Project 4 –Health Project

Treatment group: NCDI health facilities (Family Clinics, District Health Centers, Soum hospitals, Inter-soum Hospitals, Aimag Outpatient Units, Feldsher stations).

Comparison group: Improvements in NCD facilities (services, activities, trained staff, equipment and supplies including provider and client materials) will be compared between year two of the project (2010 as baseline) (t0) before the implementation started (in 2011) and year five of the Compact (2013) (t1).

Selection Method: Stratified random sample of facilities, based on stratification into urban and rural.

Baseline data collection: Baseline data (t0) will be collected on stratified random sample of facilities in 2010 (Facility-based Impact Study).



Final data collection: Facility-based Impact Study in year 2013 (t1).

Methodology:

The key impact indicators for the project overall are (i) increased productive years of the workforce and increased life-expectancy, (ii) mortality due to traffic road injuries, (iii) the rate of treated diabetes and (iv) the rate of treated hypertension and (v) the increased capacity of facilities that represent relevant parts of the comprehensive health project. The impact evaluation of the Health Project seeks to measure the impact in the near term of MCA health assistance and determine if there is a difference in prevention, screening and treatment of NCDs in the assisted facilities. Over the long term, these changes are expected to lead to increased productive years of the labor force and by this will contribute to poverty reduction through economic growth. These long-term results (within 20 years) are consistent with the experience, of similar but long-term health projects like the North Karelia Project and will require that the time-frame for the key impact indicator 'Increased productive years of work force' will be 20 years to see changes of substantial magnitude instead of within the project time-frame of five years. The three other key impact indicators are expected to have more noticeable changes evaluated after the project's duration of in total five years; anyhow it has to be considered that the time-frame for the implementation of project activities (especially IEC) in total will only be two and a half year, with the screening activities lasting in maximum 17 months.

The impact of the health project is difficult to measure in terms of a causal relationship between project and impact in the short run. As the target-group of the health project enfold 95 % of the population a control-group is difficult to define in general (e.g. in terms of sample-size) and would raise ethical concerns; only single parts of the activities may in the further development of evaluation strategies for all interventions of the health project use control groups. Therefore the measurement of the impact has to focus on a pre-post measurement and comparison before and after the project and will be mainly oriented on the improvements of health facilities to provide access to prevention, early detection and treatment of NCDs. Therefore an Impact Study based on the health facilities will be conducted using a comparison before and after the project and the citizens' response in terms of their knowledge, attitudes and partially behavior as it will be measured by the KAP study on NCDs for the population (mainly measuring knowledge and attitudes) and the STEPS (only measuring practice and including physiological measurements) after the project has ended. The Facility-based Impact study will be conducted at the end of the project whereas the KAP for the population and the STEPS (WHO) will be conducted after the project has ended. This later conduction is related to a delay that occurred in the provision of equipment and supplies which led to a postponed start of especially the screening activities which are planned to start not before March 2012. As by this the implementation period of main project activities was significantly postponed and to be able to identify changes especially on the population level it was decided to postpone the conduction of the KAP and the STEPS to at least ensure an implementation period of around 18-20 months.

The Facility Based Impact Study (FBIS) will be conducted twice nationwide; the first baseline data-collection includes in total 212 health facilities (194 from the primary health care level, 18 from the secondary health care level, 96 from urban areas and 116 from rural areas) and in total 1668 members of health staff in facilities (medical and specialized doctors nurses, bagh feldshers, NCD coordinators, Health facilities managers and Quality managers from primary and secondary health facilities). The FBIS is conducted once as a baseline in winter 2010/2011, and will be conducted for the second time for the final data collection in winter 2012/2013. The study is structured by four different segments of data-collection: 1) data collection related to health



MCA-M M&E Plan

facilities in terms of amount of urban and rural, primary and secondary level facilities, number of doctors and other staff and served population based on the review of available data and statistics from DOH to provide the sample frame, 2) self-administered questionnaires for different target-groups in the health facilities (doctors, nurses, bagh-feldshers, NCD coordinators, managers); 3) qualitative focus-group discussion with health staff in the facilities investigating the practice in Family Health Centers, Soum Health centers and Inter-soum hospitals, District and Aimag Hospitals, and 4) standardized interviews with clients of facilities. The questionnaires measure the availability, quantity and quality of prevention, screening and early detection services related to NCDs as kind of provided prevention, health education and promotion, screening, counseling, attitudes, referral system and clinical pathways, equipment, drugs, qualifications and trainings of staff, cooperation and coordination activities with other institutions and NGOs, related to CVD, hypertension, diabetes type II, cervical cancer and breast cancer and related risk factors.

The FBIS is supplemented by an evaluation of the structural and population-based improvements of prevention and early detection, described in the detailed M&E Plan for the health project. These will build on (I) Improved National and Local Response to NCDI, which will include impact measurements of structural improvements for NCDI prevention, (II) Increased understanding of NCDI, which will focus on knowledge, attitudes and practice for prevention and early detection of NCD within the target-groups and (III) Increased availability of sound NCDI services which will measure the increase in availability and quality of prevention, screening and early detection procedures, capacities and services.

The following summary of evaluation strategies shows an overview of the evaluation strategies for the health project. Details are described in the detailed M&E plan for the project.

TABLE: Health Project Summary of Strategies, Comparison Groups and Variables of Interest

Project Activity Area:	Proposed Methodology	Beneficiary	Comparison Group(s)	Variables of Interest
Availability of sound services	Before and After Comparison	Health Facilities after project	Health Facilities before project	Facility-level: e.g. - Availability, quality and quantity of early detection and partially treatment for diabetes and hypertension - Availability, quality and quantity of prevention and health education services - Availability, quality and quantity of screening services - Availability, quality and quantity of equipment, drugs, supplies, trained staff
Understanding NCD	Before and After Comparison	Population after project	Population before project	Population-level: e.g. - Knowledge, awareness, attitude, practice of prevention of NCDs: Hypertension, Diabetes type II, CVDs, Breast and Cervical Cancer - Number of people in NCD high risk groups - Number of served users in workplaces -
Improved local and national responses	Before and After Comparison	Structural national and local responses after project	Structural local responses before project	Local and national responses: e.g. - Budget on NCDs - Number of NGOS involved in prevention activities - Number of community grants given



Project 5 – Energy and Environment Project

Key Question

How does the provision of subsidies for energy efficient products, including improved stoves, impact fuel consumption, emissions, air pollution levels and ultimately health and income in Ulaanbaatar?

Key outcomes to be evaluated include a) fuel consumption and costs, b) stove usage, c) emissions from houses and gers in ger areas, d) indoor and outdoor air pollution levels, e) air pollution related health effects, and f) household income.

Methodology

On one level, clear treatment and comparison populations exist in the households that install an improved stove (treatment) and those that do not (comparison). However, due to the targeted roll-out of the subsidy program, which began prior to the impact evaluation, a randomized design was not feasible, and selection bias is expected between the treatment and comparison populations. Therefore, a matched design will be used to compare the direct effects of the subsidy and improved stoves on household income through reduced fuel consumption and expenditure. Since baseline data was not collected prior to project roll-out, households will be matched on a variety of characteristics anticipated to be unaffected by adoption of an improved stove, such as ger/house size, household size, education level, and, pending data availability, prior income levels.

In addition to the direct household level impacts anticipated through use of improved stoves, the project is expected to lead to improvements in ambient air quality in Ulaanbaatar, which are, in turn, expected to yield indirect health and income effects on the city's entire population. For this level of analysis, a suitable comparison group (for the city of Ulaanbaatar) is not available, so modeling based on measured emission factors, ambient air quality monitoring, and established dose response functions will be used to estimate impacts.

Household surveys will be conducted in a sample of households (including houses and gers) with both improved and traditional stoves to measure fuel consumption, fuel expenditure, health outcomes, and stove use behavior. Fuel and stove use varies considerably throughout the winter (heating season), linked to changes in temperature. To understand the seasonal variation, households will be visited multiple times, and stove use sensors will be installed to track stove use and refueling events in between survey visits. This data will be used to estimate direct income effects of adoption of improved stoves. Stove use sensors will also be used to assess whether additional layers of insulation increase thermal efficiency in gers.

The household survey data will be integrated with emission measurements from a subsample of households, also including both houses and gers and improved and traditional stoves. In this subsample, emissions and indoor air quality measurements will be taken over a 24 hour period, yielding emissions factors for traditional and improved stoves. These emission factors will be combined with seasonal fuel use gleaned from the household survey leading to overall emissions estimates. We will link the emissions and exposure data with ambient air measurements to model



MCA-M M&E Plan

ambient air pollution changes and exposure for Ulaanbaatar more generally. We will then use established dose response functions to estimate health effects of modeled changes in ambient air quality.

The first round of pilot measurements, for both the household survey and emissions measurements, will be undertaken during the winter of 2011-2012. However, this data will only cover the second half of the heating season, so the first full heating season measurements will be conducted during the winter of 2012-2013. Future measurements will be geared to better understanding the impacts of using additional layers of insulation and emissions factors associated with different improved stoves in practice.



D. Summary of Indicator and Target Changes (2010 Revision)

Rail Project Indicators

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Increase in Mongolia GDP due to rail improvements
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Freight Turnover
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Mine traffic
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Percent of wagons leased
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Customer satisfaction
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010



MCA-M M&E Plan

Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Customer satisfaction
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Railway operating ratio
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Wagon time to destination
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Average locomotive availability (%)
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Average locomotive availability (%)
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Locomotives leased
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.



MCA-M M&E Plan

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Wagons leased
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Maintenance equipment leased
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Signaling and Communications system leased
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Leasing company (LeaseCo) established
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Completion of UBTZ Financial Accounting Report
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	



MCA-M M&E Plan

Indicator	Completion of all UBTZ technical training
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase rail traffic and shipping efficiency
Activity	
Indicator	Operating company (OpCo) contract signed
Modification	Deletion of the indicator
Justification	Due to the cancellation of the Rail Project, the indicators related to the Rail Project were deleted and are no longer in MCA-M ITT.

Property Rights Project (Privatization of Ger Area Land Plots Activity)

Indicator Modification Form	
Date	March 2010
Project Objective	Increase the capitalization of land assets
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Immovable property value of hashaa plots in UB
Modification	Change in Frequency
Justification	Data collections will be conducted in Year 2 and Year 5 according to new M&E Plan.

Indicator Modification Form	
Date	March 2010
Project Objective	Increase the capitalization of land assets
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Immovable property value of hashaa plots outside UB
Modification	Change in Frequency
Justification	Data collections will be conducted in Year 2 and Year 5 according to new M&E Plan.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased efficiency of land registration
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Time to register land (days)
Modification	Addition of new indicator
Justification	This outcome level indicator has been added to provide a clear achievement on reduced time to register land and reduced bureaucracy of land registration process.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased efficiency of land registration
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Monetary cost to register land (USD)
Modification	Addition of new indicator



MCA-M M&E Plan

Justification	This outcome level indicator has been added to provide a clear achievement on reduced bureaucracy of land registration process in terms of financial cost.
---------------	--

Indicator Modification Form	
Date	March 2010
Project Objective	Increased efficiency of land registration
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Number of Legal and Regulatory Reforms Adopted
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an outcome indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Increased land right formalization
Modification	Replacement of indicator
Justification	This indicator was replaced by the common indicator “Urban parcels formalized” due to the same context and purpose.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Number of Legal and Regulatory Framework or Preparatory Studies Completed
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Stakeholders Trained
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Number of Stakeholders Reached
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.



MCA-M M&E Plan

Indicator Modification Form	
Date	March 2010
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Buildings Built or Rehabilitated
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Equipment Purchased
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Urban parcels mapped
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Property Rights Project (Peri-Urban Land Leasing Activity)

Indicator Modification Form	
Date	March 2010
Project Objective	Increased herder household income
Activity	Peri-Urban Land Leasing Activity
Indicator	Income of herder households on long-term lease land
Modification	Change in frequency
Justification	Data collections will be conducted in Year 2 and Year 5 according to new M&E Plan.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased peri-urban herder productivity
Activity	Peri-Urban Land Leasing Activity
Indicator	Herd mortality rate
Modification	Change in target
Justification	The target in Year 5 has been modified from 4.5% to 4.6%, reflecting the updated ERR and delay in project implementation.



MCA-M M&E Plan

Indicator Modification Form	
Date	March 2010
Project Objective	Increased peri-urban herder productivity
Activity	Peri-Urban Land Leasing Activity
Indicator	Liter of milk per cow (semi-intensive)
Modification	Change in target
Justification	The target in Year 5 has been modified from 1,050 to 967, reflecting the updated ERR and delay in project implementation.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased peri-urban herder productivity
Activity	Peri-Urban Land Leasing Activity
Indicator	Kg of mutton per sheep
Modification	Addition of new indicator
Justification	This objective level indicator has been added to provide an achievement on meat (mutton) production in semi-intensive farming.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased peri-urban herder productivity
Activity	Peri-Urban Land Leasing Activity
Indicator	Kg of beef per cattle
Modification	Addition of new indicator
Justification	This objective level indicator has been added to provide an achievement on meat (beef) production in semi-intensive farming.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Number of herder groups adopting intensive farm management techniques
Modification	Retirement of indicator and addition of three split indicators and target change
Justification	This outcome level indicator has been retired, and three separate indicators, 1) Number of herder groups adopting carrying capacity for intensive farm, 2) Number of herder groups adopting recommended composition of species for intensive farm and 3) Number of herder groups adopting hay making requirement /capacity for intensive farm have been added to provide specifics of the intensive farming adoption achievement. Due to expanded activity, the target in Year 5 has been expended from 40 to 46.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Number of herder groups adopting semi-intensive farm management techniques
Modification	Retirement of indicator and addition of three split indicators and target change



MCA-M M&E Plan

Justification	This outcome level indicator has been retired, and three separate indicators, 1) Number of herder groups having 62.5 sheep unit livestock per 100 ha (+/- range TBD), 2) Number of herder groups having species with 4.4% (24) horse, 8.8% (48) cattle, 48.6% (264) sheep and 38.1% (207) goat (+/- range TBD) and 3) Number of herder groups having hay stored at beginning of winter season is at least 30 days of dairy herd requirement have been added to provide specifics of the intensive farming adoption achievement. Due to expanded activity, the target in Year 5 has been expended from 260 to 419.
---------------	---

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Decreased land degradation
Modification	Addition of new indicator
Justification	This outcome level indicator has been added to provide an achievement measure on decreased land degradation in Peri-Urban project area.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Number of Legal and Regulatory Reforms Adopted
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an outcome indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Leaseholds awarded
Modification	Change in frequency and target
Justification	Data collections will be conducted in Year 2 and Year 3 according to new M&E Plan. Due to expanded activity, the target in Year 5 has been expanded from 300 to 420.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Wells drilled on leaseholds
Modification	Change in target
Justification	Due to expanded activity, the target in Year 5 has been expanded from 300 to 420.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity



MCA-M M&E Plan

Indicator	Training to leaseholders – intensive and semi-intensive farming
Modification	Replacement of indicator
Justification	This indicator was replaced by the common indicator “Stakeholders Trained” due to the same context and purpose. The targets for the project years have been determined.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Training to local officials
Modification	Retirement and replacement of indicator
Justification	This indicator was replaced by the common indicator “Stakeholders Trained” due to the same context and purpose. The previous target for the indicator was added to common indicator target.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Number of Legal and Regulatory Framework or Preparatory Studies Completed
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Number of Stakeholders Reached
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Rural Hectares (Ha) mapped
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Rural Hectares (Ha) formalized
Modification	Addition of common indicator



MCA-M M&E Plan

Justification	This is a common indicator and going to be tracked as an output indicator.
---------------	--

Indicator Modification Form	
Date	March 2010
Project Objective	Optimize peri-urban rangeland carry capacity and range management
Activity	Peri-Urban Land Leasing Activity
Indicator	Repayment Rate by the leaseholder
Modification	Addition of new indicator
Justification	This outcome level indicator has been added to monitor the repayment rate by the leaseholders of Peri-Urban project.

TVET Project

Indicator Modification Form	
Date	March 2010
Project Objective	Increased income
Activity	
Indicator	Annual salary
Modification	Change in frequency and target
Justification	Data collections will be conducted in Year 2 and Year 5 according to new M&E Plan. In addition, due to expanded activity, the target in Year 5 has been extended from 1299 to 1336.

Indicator Modification Form	
Date	March 2010
Project Objective	Increased employment
Activity	
Indicator	Rate of employment
Modification	Change in frequency and target
Justification	Data collections will be conducted in Year 2 and Year 5 according to new M&E Plan. In addition, due to expanded activity, the target in Year 5 has been extended from 73% to 75%.

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Non-governmental funding for vocational education
Modification	Change in target
Justification	Due to expanded activity, the target in Year 5 has been extended from +12% to 16%.

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Legal, financial, and / or policy reforms adopted
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an outcome indicator.



MCA-M M&E Plan

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Number of students participating in MCC-supported education activities
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an outcome indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Number of instructors trained or certified through MCC-supported activities
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an outcome indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Educational facilities constructed / rehabilitated and / or equipped through MCC-supported activities
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an outcome indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Number of practical training sites upgraded
Modification	Addition of new indicator
Justification	As an expansion of the TVET project, activity related to improvement and upgrading of the practical training sites was added. Therefore, this output level indicator has been added to monitor a number of practical training sites that receive upgrades by TVET project.

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Number of PPP agreements established
Modification	Addition of new indicator
Justification	In order to track result of the PPP activities, this output level indicator has been added.



MCA-M M&E Plan

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Increased public awareness and perception of TVET benefits
Modification	Addition of new indicator
Justification	One of the substantial interventions that is planned to be implemented by the TVET project is public outreach among TVET stakeholders and beneficiaries to raise the perception of the TVET sector. Therefore, this output level indicator has been added to monitor a number of PPP agreements established.

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Value of signed contracts (\$US) for MCC-supported educational facility construction / rehabilitation and/or equipping
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Indicator Modification Form	
Date	March 2010
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Percent of contracted construction / rehabilitation / equipping works disbursed
Modification	Addition of common indicator
Justification	This is a common indicator and going to be tracked as an output indicator.

Health Project

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Prevalence of high salt intake
Modification	Addition of new indicator
Justification	This objective level indicator has been added in order to evaluate performance of activities targeting NCDI primary risk factors.

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Prevalence of high blood sugar
Modification	Addition of new indicator
Justification	This objective level indicator has been added in order to evaluate performance of activities targeting NCDI primary risk factors.



MCA-M M&E Plan

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Diabetes and hypertension controlled
Modification	Retirement of indicator and addition of several split indicators
Justification	This objective level indicator has been divided into following several indicators in order to clear distinguish specific targets and activities: <ol style="list-style-type: none"> 1. Prevalence of hypertension 2. Treatment of diabetes 3. Treatment of hypertension

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	National exposure to nicotine through smoking and second hand smoke
Modification	Addition of new indicator
Justification	This objective level indicator has been added in order to evaluate performance of activities targeting NCDI primary risk factors

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI case management activity
Indicator	Outcomes for stroke and heart attack (in targeted hospitals)
Modification	Addition of new indicator
Justification	This objective level indicator has been added in relation to expansion of health project

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Cervical cancer prevention
Modification	Retirement of indicator
Justification	This objective level indicator has been removed

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention/early detection/case management
Indicator	Productive years of workforce
Modification	Addition of new indicator
Justification	This objective level indicator has been added in order evaluate overall project performance

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention



MCA-M M&E Plan

Indicator	Mortality due to road traffic injuries
Modification	Addition of new indicator
Justification	This objective level indicator has been added in order evaluate project performance on traffic related injury prevention

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Budget for NCD
Modification	Addition of new indicator
Justification	This outcome level indicator has been added in order evaluate achievements on NCDI prevention and project implication in policy making level

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Local government units engaged in NCDI
Modification	Addition of new indicator
Justification	This outcome level indicator has been added in order to show project performance on community involvement on NCDI prevention issues

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection
Indicator	Percent of cancer cases diagnosed in early stage
Modification	Change in indicator title
Justification	The title of this outcome level indicator has been changed to “early detection of cervical cancer”

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection
Indicator	Percent of those with known diagnosis of hypertension/diabetes out of all actual cases in adult population
Modification	Change in title and separation in to two indicators
Justification	The title of this outcome level indicator has been changed and the indicator divided in to two indicators: <ol style="list-style-type: none"> 1. Treatment of diabetes 2. Treatment of hypertension

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection
Indicator	Screened for breast and cervical cancer
Modification	Change in title and definition



MCA-M M&E Plan

Justification	The title of this outcome level indicator has been changed to “early detection of cervical cancer”; defined as “Percent of Mongolian women aged 30 – 60 who have ever been examined through VIA or Pap for cervical cancer”
---------------	---

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection/case management
Indicator	Counseling for diabetes and hypertension
Modification	Change in title, separation in to two indicators and target extension
Justification	The title of this outcome level indicator has been changed and the indicator divided in to two indicators: 1. Sound services on NCD (PHC facilities) 2. Sound services on NCD (workplace) Targets extended from counseling for diabetes/hypertension to the NCDI service package

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	NCD prevention at schools
Modification	Addition of new indicator
Justification	This outcome level indicator has been added in order to show project performance on IEC/BCC activities

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	Awareness of working population related to NCD prevention
Modification	Addition of new indicator
Justification	This outcome level indicator has been added in order to show project performance on IEC/BCC activities

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Capacity of health staff
Modification	Addition of new indicator
Justification	This output level indicator has been added in order to show project achievements on training/capacity building activities

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI case management
Indicator	Availability of specialized care after stroke and MI in UB
Modification	Addition of new indicator



MCA-M M&E Plan

Justification	This output level indicator has been added in relation with the expansion of health project (stroke/MI component)
---------------	---

Indicator Modification Form	
Date	March 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Civil society mobilization
Modification	Addition of new indicator
Justification	This output level indicator has been added in order to evaluate achievements in community mobilization, inter-sectoral cooperation and competitive small grants program

Indicator Modification Form	
Date	May 2010
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection
Indicator	Early detection of cervical cancer
Modification	Change in definition
Justification	The definition of this outcome level indicator has been changed to "Percent of Mongolian women aged 30 – 39 who have ever been examined through PAP for cervical cancer". These changes occurred due to changes in cervical cancer screening strategy



E. Summary of Indicator and Target Changes (2011 Revision)

Property Rights Project (Privatization of Ger Area Land Plots Activity)

Change in frequency;

Indicator Modification Form	
Date	December 2011
Project Objective	Increase the capitalization of land assets
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Immovable property value of hashaa plots in UB
Modification	Change in Frequency
Justification	Data collections will be conducted in Year 4 and Year 5 according to new M&E Plan.

Indicator Modification Form	
Date	December 2011
Project Objective	Increase the capitalization of land assets
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Immovable property value of hashaa plots outside UB
Modification	Change in Frequency
Justification	Data collections will be conducted in Year 4 and Year 5 according to new M&E Plan.

Change in data source/responsibility entity;

Indicator Modification Form	
Date	December 2011
Project Objective	Increase the capitalization of land assets
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Households accessing bank credit
Modification	Change in data source/responsibility entity
Justification	Due to unreliable data source, data source has been replaced by Special Hashaa Plot Survey.

Replacement of indicator;

Indicator Modification Form	
Date	December 2011
Project Objective	Increased efficiency of land registration
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Time to register land (days)
Modification	Replacement of indicator
Justification	This indicator has been replaced by new common indicator "Time for property transactions" and going to be tracked as an outcome indicator. Data source will be Urban Registry System Process Study. Data collection frequency will be year 3 and 5.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased efficiency of land registration



MCA-M M&E Plan

Activity	Privatization of Ger Area Land Plots Activity
Indicator	Monetary cost to register land
Modification	Replacement of indicator
Justification	This indicator has been replaced by new common indicator “Cost for property transactions” and going to be tracked as an outcome indicator. Data source will be Urban Registry System Process Study. Data collection frequency will be year 3 and 5.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Urban parcels formalized
Modification	Replacement of indicator
Justification	This indicator has been replaced by the common indicator “Household land rights formalized” and going to be tracked as an output indicator.. Data source will be PIU and GASR. Frequency in data collection will be quarterly, starting year 4.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Number of stakeholders reached
Modification	Replacement of indicator
Justification	This output level indicator is no longer common indicator and has been replaced by “Number of household reached” with new target, due to reconnaissance work of hashaa registration and privatization activity. Data source will be PIU and its contractor. Frequency of data will be quarterly.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Buildings built or rehabilitated
Modification	Replacement of indicator
Justification	This indicator has been replaced by “Land administration offices established or upgraded” and going to be tracked as a common output indicator.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Parcels corrected and incorporated in land system
Modification	Replacement of indicator
Justification	This is common new indicator and to be tracked as an output indicator.

Addition of new indicator;

Indicator Modification Form	
Date	December 2011



MCA-M M&E Plan

Project Objective	Increased efficiency of land registration
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Number of property transactions
Modification	Addition of new indicator
Justification	This outcome level indicator has been added to provide changes in total number of property transactions in formal system at GASR according to PIU activity in registration office. Data source will be GASR and frequency of data collection is annually.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased efficiency of land registration
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Number of mortgage transactions
Modification	Addition of new indicator
Justification	This outcome level indicator has been added to provide changes in total number of mortgage transactions in formal system at GASR according to PIU activity in registration office. Data source will be GASR and frequency of data collection is annually.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased land right formalization
Activity	Privatization of Ger Area Land Plots Activity
Indicator	Conflicts successfully mediated
Modification	Addition of new common indicator
Justification	This is a common indicator and going to be tracked as an output indicator. Data source will be Capital and Administrative Courts, PIU and land offices. Frequency of data will be half-yearly. No target will be set.

Change in target:

Indicator Modification Form	
Date	December 2011
Project Objective	Increased land right formalization
Activity	Privatization of Ger area Land Plots Activity
Indicator	Household land right formalized
Modification	Change in target
Justification	The target in Year 3 has been modified from 30,000 to 0, in Year 4 from 60,000 to 38,172 and in Year 5 from 75,000 to 53,000, reflecting the updated plan and delay in project implementation.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased land right formalization
Activity	Privatization of Ger area Land Plots Activity
Indicator	Parcels corrected or incorporated in land system
Modification	Change in target
Justification	The target in Year 3 has been modified from 30,000 to 0, in Year 4 from 60,000 to 38,172 and in Year 5 from 75,000 to 53,000, reflecting the updated plan and delay in project implementation.



Peri-Urban Project

Indicator Modification Form	
Date	December 2011
Project Objective	Increased herder household income
Activity	
Indicator	Net earned income of herder households in Darkhan, Erdenet and UB
Modification	Change in name, definition, frequency and targets
Justification	Based on ERR model revision, this indicator was divided into two different indicators in terms of the areas

Indicator Modification Form	
Date	December 2011
Project Objective	Increased herder household income
Activity	
Indicator	Net earned income of herder households in Choibalsan and Kharkhorin
Modification	Addition of new indicator
Justification	The changes are based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	Increased peri-urban herder productivity
Activity	
Indicator	Percent reduction in mortality rate of cattle in treatment versus comparison/control group, intensive farms
Modification	Change in name, definition, data source, frequency and targets
Justification	Based on ERR model revision, this indicator was fragmented into 3 indicators.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased peri-urban herder productivity
Activity	
Indicator	Percent reduction in mortality rate of cattle in treatment versus comparison/control group, semi-intensive farms
Modification	Change in name, definition, data source, frequency and targets
Justification	Based on ERR model revision, this indicator was fragmented into 3 indicators.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased peri-urban herder productivity
Activity	
Indicator	Percent reduction in mortality rate of sheep in treatment versus comparison/control group, semi-intensive farms
Modification	Change in name, definition, data source, frequency and targets
Justification	Based on ERR model revision, this indicator was fragmented into 3 indicators.

Indicator Modification Form	
Date	December 2011
Project Objective	Increased peri-urban herder productivity



MCA-M M&E Plan

Activity	
Indicator	Liters of milk per cow, intensive farms
Modification	Change in name, definition, data source, frequency and targets
Justification	The changes are based on ERR model revision

Indicator Modification Form

Date	December 2011
Project Objective	Increased peri-urban herder productivity
Activity	
Indicator	Kg of mutton per sheep
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form

Date	December 2011
Project Objective	Increased peri-urban herder productivity
Activity	
Indicator	Kg of beef per cow
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form

Date	December 2011
Project Objective	Increased peri-urban herder productivity
Activity	
Indicator	Liters of milk per cow, semi-intensive farms
Modification	Change in name, definition, data source, frequency and targets
Justification	The changes are based on ERR model revision

Indicator Modification Form

Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of herder groups limiting their livestock population to the carrying capacity of their leases on intensive farms
Modification	Change in name, definition, data source
Justification	This change was based on ERR model revision

Indicator Modification Form

Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of herder groups adopting recommended composition of species for intensive farms
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form

Date	December 2011
Project Objective	



MCA-M M&E Plan

Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of herder groups adopting recommended composition of species for intensive farms
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of herder groups adopting hay making requirement/capacity for intensive farms
Modification	Change in definition, data source and frequency
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of herder groups limiting their livestock population to the carrying capacity of their leases on semi-intensive farms
Modification	Change in name, definition, data source and frequency
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of herder groups limiting their livestock population to the carrying capacity of their leases on semi-intensive farms
Modification	Change in name, definition, data source and frequency
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of herder groups adopting recommended composition of species for semi-intensive farms
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of herder groups adopting hay making requirements/capacity for semi-intensive farms
Modification	Change in name, definition, data source and frequency
Justification	This change was based on ERR model revision



MCA-M M&E Plan

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Decreased land degradation
Modification	Change in name, definition, data source and frequency
Justification	Based on ERR model revision, this indicator was divided into 2 indicators

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Management effect, summer standing biomass
Modification	Addition of indicator
Justification	Based on ERR model revision, the land degradation indicator was divided into 2 indicators

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Management effect, winter standing biomass
Modification	Addition of indicator
Justification	Based on ERR model revision, the land degradation indicator was divided into 2 indicators

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Weight gain (cattle)
Modification	Addition of indicator
Justification	Based on ERR model revision, this indicator was divided into 2 indicators

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Weight gain (sheep)
Modification	Addition of indicator
Justification	Based on ERR model revision, this indicator was divided into 2 indicators

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Optimize peri-urban rangeland carry capacity and range management
Indicator	Number of Legal and Regulatory Reforms Adopted



Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Outputs
Indicator	Leaseholds awarded
Modification	Change in frequency
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Outputs
Indicator	Household land rights formalized
Modification	Addition of indicator
Justification	This indicator was a common indicator added in accordance to MCC common indicator requirements.

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Outputs
Indicator	Stakeholders trained (female)
Modification	Addition of indicator
Justification	This change was based on MCC-ESA suggestion

113



MCA-M M&E Plan

	Completed
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Outputs
Indicator	Conflicts successfully mediated
Modification	Addition of indicator
Justification	This indicator was a common indicator added in accordance to MCC common indicator requirements.

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Outputs
Indicator	Number of stakeholders reached
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Outputs
Indicator	Rural hectares (Ha) mapped
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Outputs
Indicator	Rural hectares (Ha) formalized
Modification	Deletion of indicator
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Outputs
Indicator	Repayment rate by the leaseholders (Female)
Modification	Addition of indicator
Justification	This change was based on MCC-ESA suggestion

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Process Milestones
Indicator	Legal and regulatory commission report prepared



MCA-M M&E Plan

Modification	Change of name, definition and target
Justification	This change was based on ERR model revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Process Milestones
Indicator	Final GIS database and maps prepared (Ulaanbaatar, Darkhan, and Erdenet)
Modification	Change of name, frequency and target
Justification	This indicator was changed according to ERR revision and placed above a relevant indicator

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Process Milestones
Indicator	Applications to lease land submitted by herder groups (UB, Darkhan and Erdenet)
Modification	Change of name
Justification	This indicator was changed according to ERR revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Process Milestones
Indicator	Applications to lease land submitted by herder groups (Choibalsan and Kharkhorin)
Modification	Change of name
Justification	This indicator was changed according to ERR revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Process Milestones
Indicator	Selection of herder groups to receive land leases, and lease signing (Ulaanbaatar, Darkhan and Erdenet)
Modification	Change of name
Justification	This indicator was changed according to ERR revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Process Milestones
Indicator	Selection of herder groups to receive land leases, and lease signing (Choibalsan and Kharkhorin)
Modification	Change of name and target
Justification	This indicator was changed according to ERR revision

Indicator Modification Form	
Date	December 2011
Project Objective	



MCA-M M&E Plan

Activity	Process Milestones
Indicator	Training carried out
Modification	Change of name
Justification	This indicator was changed according to ERR revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Process Milestones
Indicator	Materials for fencing and animal shelters provided (Ulaanbaatar, Darkhan and Erdenet)
Modification	Change of name
Justification	This indicator was changed according to ERR revision

Indicator Modification Form	
Date	December 2011
Project Objective	
Activity	Process Milestones
Indicator	Materials for fencing and animal shelters provided (Choibalsan and Kharkhorin)
Modification	Change of name
Justification	This indicator was changed according to ERR revision

TVET Project

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Graduates in MCC-supported education activities
Modification	Change of name for common indicator
Justification	It is changed in accordance to the MCC common indicator requirements.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Students participating in MCC-supported education activities
Modification	Change of name for common indicator
Justification	It is changed in accordance to the MCC common indicator requirements.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Educational facilities constructed or rehabilitated
Modification	Change of name and indicator level for common indicator
Justification	It is changed in accordance to the MCC common indicator requirements.



MCA-M M&E Plan

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Employed graduates of MCC-supported educational activities
Modification	Addition of new common indicator
Justification	It is changed in accordance to the MCC common indicator requirements.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Instructors trained
Modification	Change of name and indicator level for common indicator
Justification	It is changed in accordance to the MCC common indicator requirements.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Legal, financial and/or policy reforms adopted
Modification	Change of indicator level for common indicator and targets set.
Justification	It is changed in accordance to the MCC common indicator requirements.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Number of practical training sites fully upgraded
Modification	Change of target
Justification	Targets are set in accordance to the project activities.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Number of PPP agreements established
Modification	Setting of targets
Justification	Targets are set in accordance to the project activities.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Increased public awareness of TVET benefits
Modification	Replaced by 5 different indicators



Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Change in proportion of families by income statements: High income/Mid income/Low income
Modification	Addition of indicator and setting of targets
Justification	Based on the Public Perceptions Survey, it is added and targets are set.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Knowledge of local TVET providers
Modification	Addition of indicator and setting of targets
Justification	Based on the Public Perceptions Survey, it is added and targets are set.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Expression of interest in TVET
Modification	Addition of indicator and setting of targets
Justification	Based on the Public Perceptions Survey, it is added and targets are set.

118



MCA-M M&E Plan

	equipping contracts signed
Modification	Change of name and indicator level for common indicator
Justification	It is changed in accordance to the MCC common indicator requirements.

Indicator Modification Form	
Date	December 2011
Project Objective	Improved quality and relevancy of TVET system
Activity	
Indicator	Value of educational facility construction, rehabilitation, and/or equipping contracts disbursed
Modification	Change of name and indicator level for common indicator
Justification	It is changed in accordance to the MCC common indicator requirements.

Health Project

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Prevalence of high salt intake
Modification	Change of the name and definition
Justification	The name has been changed to "Prevalence of reduced sodium intake" In the definition the age group changed to 25-64 years old according to target population included in survey.

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Prevalence of high blood sugar
Modification	Changed frequency and target population age
Justification	The data from the evaluation survey will be obtained in December 2013. Target population age is 40-64 according to newly approved screening strategy

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Prevalence of hypertension
Modification	Changed frequency and target population age
Justification	The data from the evaluation survey will be obtained in December 2013. Target population age is 40-64 according to newly approved screening strategy

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs



MCA-M M&E Plan

Activity	NCDI prevention activity
Indicator	National exposure to nicotine through smoking and second hand smoke
Modification	Changed name of indicator and frequency
Justification	The indicator is named as “Exposure to second-hand smoke”. The data from the evaluation survey will be obtained in December 2013.

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Treatment of diabetes
Modification	Replacement of indicator
Justification	The indicator is has been replaced by new objective level indicator “Screening for diabetes”. The data will be obtained from the Department of Health through official reporting channels using newly introduced screening reporting forms

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention activity
Indicator	Treatment of hypertension
Modification	Replacement of indicator
Justification	The indicator is has been replaced by new objective level indicator “Screening for hypertension”. The data will be obtained from the Department of Health through official reporting channels using newly introduced screening reporting forms

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	Prevention of cervical cancer through HPV vaccination
Modification	Addition of new indicator
Justification	This outcome level indicator has been added in order to performance of evaluate HPV vaccination program

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention/early detection/case management
Indicator	Productive years of workforce
Modification	Changed frequency
Justification	The baseline data will be obtained in 2012 and will reported annually

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	Mortality due to road traffic injuries



MCA-M M&E Plan

Modification	Replacement of indicator
Justification	This objective level indicator has been replaced by new indicator “Traffic accident reduction”. Data will be obtained from evaluation “black spot survey”

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	High risk for NCDs
Modification	Addition of new indicator
Justification	This objective level indicator has been added in order to evaluate performance of IEC/BCC component

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Budget for NCD
Modification	Changed name and target
Justification	The name was changed as “State budget allocated to NCDs and the target increased according to amendment in Program implementation agreement in 2010

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Local government units engaged in NCDI
Modification	Replacement of indicator
Justification	This outcome level indicator has been replaced by new indicator “Local government spending towards NCDs”. The aims is to show commitment of local government towards NCDs

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	NCD prevention at schools
Modification	Replacement of indicator
Justification	This outcome level indicator has been replaced by new output indicator “Capacity of school teachers”. The data will be obtained from training reports

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	Awareness of working population related to NCD prevention
Modification	Changed definition, source and target



MCA-M M&E Plan

Justification	The definition has been changed as “Percent of people who know about the harms of at least three NCD-related risk factors“. Data will be obtained from „KAP of general public“ survey
---------------	---

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	Smoke free places
Modification	Addition of new indicator
Justification	This outcome level indicator added to evaluate IEC/BCC activities targeting reduction of second-hand smoking

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection
Indicator	Diagnosis of diabetes
Modification	Removed
Justification	Moved to project level ME plan

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection
Indicator	Diagnosis of hypertension
Modification	Removed
Justification	Moved to project level ME plan

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection
Indicator	Early detection of cervical cancer
Modification	Changed data source
Justification	The data will be obtained from Department of health

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI early detection
Indicator	Early detection of cervical cancer (PAP)
Modification	Changed title, target group and source
Justification	The name changed to “Screening for cervical cancer”. The age of target group is 30-60 according to newly approved screening strategy. Data will be obtained from STEPS

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs



MCA-M M&E Plan

Activity	NCDI capacity building
Indicator	Sound services on NCD (facility)
Modification	Change in title and definition
Justification	The title of this outcome level indicator has been changed to “Sound NCD services”. In definition we have added “high quality”

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	Sound services on NCD (workplace)
Modification	Removed
Justification	Removed from outcome level. In output level proposed new indicator to evaluate workplace program

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Capacity of health staff
Modification	Change in definition
Justification	In definition we have added “from the health project”

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building/case management
Indicator	Availability of specialized care after stroke and AMI in UB
Modification	Changed in title and definition
Justification	The title changed as “Capacity built in stroke and AMI”. In the definition we have added “abroad”

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	Mobilization of workplaces cooperation on NCDI prevention
Modification	Addition of new indicator
Justification	This output level indicator has been added to evaluate health promotion and health promoting workplace program

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Improved preparation for traffic accidents
Modification	Addition of new indicator
Justification	This output level indicator has been added in order to show project achievements on traffic injury prevention



MCA-M M&E Plan

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI capacity building
Indicator	Hospitals that treat cervical cancer
Modification	Addition of new indicator
Justification	This output level indicator has been added to evaluate NCD capacity building activity

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention/capacity building
Indicator	Provision of health education materials
Modification	Addition of new indicator
Justification	This output level indicator has been added in order to evaluate IEC/BCC and capacity building activities. Data will be obtained from local contractor

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention/capacity building
Indicator	Availability of health education materials
Modification	Addition of new indicator
Justification	This output level indicator has been added in order to evaluate IEC/BCC and capacity building activities. Data will be obtained from FBIS survey

Indicator Modification Form	
Date	December 2011
Project Objective	Reduced risk of premature death and disability from NCDIs
Activity	NCDI prevention
Indicator	Recommendation on National strategy for salt reduction completed
Modification	Addition of new indicator
Justification	This milestone has been added as one of important contributions of the project in salt reduction activity

Road Project

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	
Indicator	Vehicle operating cost saving
Modification	Change in name, detailed definition and targets
Justification	Based on MCC consultation, this indicator's definition was revised and targets were provided

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services



MCA-M M&E Plan

Activity	Outcome
Indicator	Roughness
Modification	Change in name and detailed definition
Justification	The change was based on MCC consultation

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	Process/Outputs
Indicator	Value of signed road feasibility and design contracts
Modification	Change in targets
Justification	The change was based to reflect the current value

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	Process/Outputs
Indicator	Value disbursed of road feasibility and design contracts
Modification	Change in name and units
Justification	The change was based on MCC consultation

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	Process/Outputs
Indicator	Value disbursed of road construction contracts
Modification	Change in name and units
Justification	The change was based on MCC consultation

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	Process/Outputs
Indicator	Value disbursed of road construction contracts
Modification	Change in name, units and targets
Justification	The change was based on MCC consultation and the uncertainty of UB-Nalaikh component continuation

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	Process/Outputs
Indicator	Kilometers of roads under works contracts
Modification	Change in targets
Justification	The change was based to reflect the current amount that changed due to budget constraint

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services



MCA-M M&E Plan

Activity	Process/Outputs
Indicator	Number of workforce trained on trafficking in persons, health and safety, and HIV/AIDS
Modification	Addition of indicator
Justification	This indicator was added by the request of MCC-ESA

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	Process/Outputs
Indicator	Kilometers of roads completed
Modification	Change in detailed definition and targets
Justification	The change was based on MCC consultation

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	Process
Indicator	ESIA approved for UB-Nalaikh Road Segment
Modification	Change in targets
Justification	The change was made to reflect the current progress

Indicator Modification Form	
Date	December 2011
Project Objective	More efficient transport for trade and access to services
Activity	Process
Indicator	ESIA approved for UB-Nalaikh Road Segment
Modification	Change in targets
Justification	The change was made to reflect the current progress

Energy and Environment Project

Deletion of Indicators;

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	Household savings from decreased fuel cost
Modification	Deletion of the Indicator;
Justification	Due to Implementation complication it turned out not guaranteed.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	Health costs from air pollution in Ulaanbaatar
Modification	Deletion of the Indicator;
Justification	The indicator doesn't have regular source and it requires more detailed analysis. It will be observed or measured at the evaluation stage.



MCA-M M&E Plan

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	Admissions due to respiratory related morbidity.
Modification	Deletion of the Indicator;
Justification	The indicator doesn't have reliable source and it requires special surveys and modeling analysis. It will be observed or measured at the evaluation stage.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	Energy efficiency
Modification	Deletion of the Indicator;
Justification	The indicator is no longer the main goal of the project.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	Wind power
Indicator	Estimated power loss
Modification	Deletion of the Indicator;
Justification	Looking at the nature of the project investment, the indicator is no longer appropriate measurement.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Issue RFP for MCEEIF Technical Consultant
Modification	Deletion of the Indicator;
Justification	To be consistent with the Condition Precedence, the indicator was eliminated not to be reported as an indicator.

Replacement of Indicators;

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Reduced PM concentration
Modification	Replacement of the Indicator;
Justification	The indicator is replaced by the indicator "% Difference in PM Emissions, Homes" because top down approach is no longer appropriate measurement for the project due to implementation complication.



Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Reduced PM concentration
Modification	Replacement of the Indicator;
Justification	The indicator is replaced by the indicator “Absolute Difference in PM Emissions, Homes “ because top down approach is no longer appropriate measurement for the project due to implementation complication.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	Raw coal consumption
Modification	Replacement of the indicator
Justification	The indicator is replaced by the indicator “% Difference in Raw Coal Consumption” due to ease of interpretation.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	Fuel cost
Modification	Replacement of the indicator
Justification	The indicator is replaced by the indicator “% Difference in median fuel costs” due to ease of interpretation.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	Wind Power
Indicator	Capacity of wind power generation
Modification	Replacement of the indicator
Justification	The indicator is replaced by the indicator “Power dispatched from substation” due to the nature of the project investment.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Product testing and subsidy setting process adopted
Modification	Replacement of the indicator
Justification	The indicator is replaced by the indicator “MCEEIF: Establish an independent product testing, certification, and subsidy setting process,” to be consistent with Condition Precedence report.



Addition of new Indicators;

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: % Difference in PM Emissions from HOB sites
Modification	Addition of new Indicator
Justification	The indicator is added to present improvement at HOBs separately from implementation at households.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: % Difference Daily Household PM Emissions
Modification	Addition of new Indicator
Justification	The indicator is added to present actual improvement in relative term at the household level between homes with subsidized stoves and without subsidized stoves.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: CO Concentration in Participating Homes
Modification	Addition of new Indicator
Justification	The indicator is added to present indoor air quality that may be changed due to subsidized products, and this issue rose during the implementation.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: PM Concentration in Participating Homes
Modification	Addition of new Indicator
Justification	The indicator is added to present indoor air quality that may be changed due to subsidized products, and this issue was raised during the implementation.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Number of HOBs sites upgraded
Modification	Addition of new Indicator
Justification	The indicator is added to present implementation progress.



MCA-M M&E Plan

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Number of households purchasing subsidized products
Modification	Addition of new Indicator
Justification	The indicator is added to present implementation progress.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Number of female-headed households purchasing subsidized products
Modification	Addition of new Indicator
Justification	The indicator is added to present implementation progress and to answer gender related concerns.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Subsidized stoves sold
Modification	Addition of new Indicator
Justification	The indicator is added to present implementation progress especially for stoves since subsidized stoves affect the project success more directly.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Subsidized stoves in use
Modification	Addition of new Indicator
Justification	The indicator is added since full utilization of subsidized stoves is crucial for project result.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Energy efficient homes sold
Modification	Addition of new Indicator
Justification	The indicator is added to present implementation progress.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Average subsidy per household
Modification	Addition of new Indicator



MCA-M M&E Plan

Justification	The indicator is added to present the extent of benefit a single household gains from the project.
---------------	--

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Total subsidies spent
Modification	Addition of new Indicator
Justification	The indicator is added to present implementation progress.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Establish a process for the evaluation and approval of additional products to be subsidized;
Modification	Addition of new Indicator
Justification	The indicator is added because there is going to be another round for product evaluation and approval process, and to be consistent with Condition Precedence report.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Feasibility study/replacement plan/bidding documents for Initial replacement of HOBs
Modification	Addition of new Indicator
Justification	The indicator is added to be consistent with Condition Precedence report.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Feasibility study/replacement plan/bidding documents for 2nd round of replacement of HOBs
Modification	Addition of new Indicator
Justification	The indicator is added since there is going to be another round for HOB replacement.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Complete agreements between MCA-Mongolia and banks and/or other implementers, in support of a particular product or home to be subsidized;
Modification	Addition of new Indicator
Justification	The indicator is added to be consistent with Condition Precedence



MCA-M M&E Plan

	report.
Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Complete a form of consumer participation agreement,
Modification	Addition of new Indicator
Justification	The indicator is added to be consistent with Condition Precedence report.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	MCEEIF
Indicator	MCEEIF: Establish a framework environmental and social assessment and EMP
Modification	Addition of new Indicator
Justification	The indicator is added to be consistent with Condition Precedence report.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	Wind Power
Indicator	Wind: Power Purchase Agreement between CRETN and NewCom LLC
Modification	Addition of new Indicator
Justification	The indicator is added to be consistent with Condition Precedence report.

Indicator Modification Form	
Date	December 2011
Project Objective	To improve UB air quality
Activity	Wind Power
Indicator	Wind: Environmental Management System, environmental assessment, and EMP
Modification	Addition of new Indicator
Justification	The indicator is added to be consistent with Condition Precedence report.